

DAILY METAL REPORTER

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In This Issue

ZINC OUTSIDE THE UNITED STATES

By R. LEWIS STUBBS, Director
Zinc Development Ass'n, London, England

BRITISH METAL MARKETS

By L. H. TARRING
London, England

DOMESTIC METAL MARKET REVIEW

WASHINGTON REPORT

METAL STATISTICS

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TABLE OF CONTENTS

Washington Report	4
Zinc Outside the United States	7
By R. LEWIS STUBBS, Director Zinc Development Association, London, England	
British Metal Markets	13
By L. H. TARRING London, England	
Domestic Metal Market Review	15
U. S. Metal Import Duties	18
Metal Statistics	19

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Two LINE Editorials

A newspaper writer states that "the rock-'n'-roll craze has been exported from the United States to all corners of the globe." Unfortunately, however, an excessive supply remains un-exported.

* * *

Pain, according to an eminent physician, is merely "the psychical adjunct of an imperative protective reflex." But that's not what it is called by the sufferer from a splitting headache or a jumping toothache.

* * *

The Governor of California says there should be "a restoration of honesty and integrity in college athletics." It's a radical suggestion, but it might be worth trying as an experiment.

* * *

A visiting Englishman says he can't understand the illogical nature of the baseball fans — they censure a base-runner if he doesn't steal, and boo the umpires if they do.

* * *

An Egyptian editor refers to President Nasser as "a modern Caesar." The owners of the Suez Canal, however, regard him as merely a modern setzer.

* * *

An astronomer announces the appearance of several new canals on Mars. Maybe the Martians are just trying to do something to offset higher railroad freight rates.

Washington Report



May 15, 1959

Constructive action to aid the world's ailing lead and zinc industries was announced during the month in review following a meeting of 20 countries under United Nations auspices. After the meeting, it was officially announced by the UN Lead and Zinc Committee that voluntary curtailments in commercial production and exports have sharply reduced the estimated excess of new supply over consumption for both metals. The committee reported that the anticipated lead metal surplus, originally placed at 150,000 metric tons for 1959, had been whittled down to an annual rate of 59,000 tons in the second half of this year, with the zinc surplus rate slashed from 120,000 tons previously to only 16,000 tons.

The UN committee voiced hope that the indicated reduction in supplies would quickly bring about more satisfactory market conditions. At the same time the great importance of increased consumption was stressed. References were also made to the possibility of consumers' stocks being increased in some important consuming countries. The Committee is of the opinion that, if the effect of these measures does not appear to be sufficient, there should be a further meeting of interested Governments. The representatives of a number of countries again expressed their concern to see the removal of the United States import quotas.

Stockpile Problems

Here in the Capitol, the Administration has the stockpile bear by the tail and doesn't know how to let go. Franklin G. Floete, head of the General Services Administration, which manages the Government stockpiles, reported that the U. S. has some \$4,-000,000,000 of unneeded metals and minerals originally purchased for stockpiling. He and other agency officials told a House Appropriations subcommittee, in testimony recently released, that they are eager to start solving the problem of disposing of these surpluses but was in a quandary as to what action to take.

Materials in the strategic stockpile for emergency use, a supplemental stockpile and other Government re-

serves are valued at more than \$8,000,-000,000, officials said.

The Office of Civil and Defense Mobilization, which has responsibility for the strategic stockpile, has approved 39 items for disposal, Mr. Floete said. GSA, he said, has worked out disposal plans for the 17 of the materials—some of these are agar, badeleyite, gem diamonds, platinum group metals, pyrethrum, quinine and zircons. Disposal plans for 22 other materials, which include aluminum, bauxite, beryl, bismuth, cadmium, chromite, cobalt, graphite, lead, magnesium, manganese, mercury, molybdenum, nickel, tin, tungsten and zinc, are being worked out. The precise amounts of each on hand were not disclosed.

It will be recalled that the ODCM recently was preparing to dispose gradually of 136,000 short tons—about \$80,000,000—of excess copper but decided not to sell the metal after protests from Senators and Representatives from copper producing countries.

Revise Barter List

While the GSA was trying to figure out how to reduce its holdings, the Agriculture Department dropped four minerals from the list of materials eligible to be received in barter for U. S. surplus crop and added a new one. Lead, selenium, asbestos and chemical grade manganese (types A and B) will no longer be considered for barter contracts, according to the announcement. Metallurgical manganese ore was made eligible.

At the same time, the agency reported barter activity is running well ahead of last year, and officials indicated the value of new contracts negotiated in fiscal 1959, ending June 30, probably will top \$125,000,000

Under the barter program, private exporters buy surplus farm commodities from Government stocks and swap them overseas for strategic minerals. The minerals, when received, are sold back to the Government, which places them in its supplemental stockpile.

The list of minerals the agency will accept in a barter deal is changed from time to time as stockpile quotas are filled. Nine minerals were dropped from the list earlier this year. Officials said manganese ore, which had been on the list before it was revised last November, was restored in response to many requests.

These minerals are now eligible for consideration: Abrasives; crude aluminum oxide; antimony; bauxite (Surinam, Jamaican and refractory); beryl (hand-cobbed); bismuth; chromite (refractory and chemical); columbite; cryolite (natural); fluorspar (metallurgical); mercury, metallurgical manganese ore; mica (muscovite block, film and splittings); nickel; palladium; silicon carbide; tantalite; tin, and zinc.

The agency reported barter contracts worth \$59,600,000 were approved during the three months ended March 31, compared with \$12,700,000 in the like period last year. This brought to \$95,600,000 the total value of new barter deals negotiated in the first nine months of the current fiscal year started July 1. The total was well ahead of the \$65,100,000 in new contracts negotiated in the full 1958 fiscal year, when activity was under tight rein due to fears the program was hurting commercial farm exports.

Nickel, Cobalt Hearings

A House Government operations subcommittee held hearings during the month of contemplated nickel and metal purchases from Freeport Sulphur Company. Mr. Floete told the group that efforts have been made to scale down the Government's long-term purchase commitments from a new Louisiana plant but that Freeport has refused to budge on the issue. He said the company contends it cannot reopen the contract because of fixed financial arrangements it has made for the production.

Subcommittee Chairman Brooks (D., Texas), said the Government spent some \$6,000,000 to build the plant at Braithwaite, La., and for payment of Freeport's mining, shipping and processing expenses in getting the operation under way. The Government sold the plant to Freeport in March of this year for \$236,455.

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Zinc Outside the United States

By R. LEWIS STUBBS, Director, Zinc Development Association, London, England

IN recent years both the production and consumption of zinc outside the United States have expanded steadily. In 1958 the output of metal exceeded 2 million metric tons, a rise of over 10 per cent (200,000 tons) in three years; and in the same period consumption rose by 7 per cent to over 1¾ million tons. But it has been a difficult period for most producers since world supply has exceeded demand. Before considering the situation as a whole, let us see how individual countries have fared.

The Communist Bloc

Last December I went with a Z. D. A. team to Russia, now the world's second producer and consumer of zinc. Everywhere we saw signs of great activity and progress — industrial production rose by 10 per cent in 1958 — and all the experts we met were enthusiastic about the future for zinc. The potential demand is certainly enormous, since Russia is three times the size of the U. S. A. and has a population of over 200 million.

Thirty years ago output was only 3,000 tons a year even though zinc and lead had been mined since 1839. The five year plans changed all this. During the first Plan (1928-32) two new thermal smelters were built at important coal mining centres with the help of foreign experts. One in the Ukraine (at Konstantinovka) began in 1930, and the other in Western Siberia (at Belovo in the Russian S. F. S. R.) in 1931. Also the old plant in the Caucasus (at Ordzhonikidze) was reconstructed and enlarged.

The second Five Year Plan brought further progress. At the Caucasian plant an electrolytic refinery, designed by American experts, began production in 1934, and another, German designed, started in 1935 in the Urals (at Chelyabinsk). By 1938 Soviet output had reached 75,000 tons a year. The ores came mainly from the Caucasus, the Urals, the Ridder district in Kazakhstan and from Eastern Siberia.

During the war the Ukraine was

The accompanying article is the text of an address delivered at the 41st annual meeting of the American Zinc Institute on April 23, 1959, in Chicago, Ill.

overrun and the zinc plant destroyed. The plant in the Caucasus was evacuated to the plants in the Urals and Western Siberia which were enlarged. Some also went to Kazakhstan where a new electrolytic refinery was erected at Ust-Kamenogorsk, a centre of hydro-electric power.

After the war the distillation plants were not rebuilt. Instead, an electrolytic refinery was installed in the patched up buildings of the Ukrainian plant, and in the Caucasus the two old plants were replaced by an electrolytic plant of much larger capacity. At Ust-Kamenogorsk the wartime plant was improved and extended. Then during the fifth Five Year Plan (1951-55) a second refinery was added, based on equipment removed as reparations from the former German plant at Magdeburg, and Ust-Kamenogorsk became the largest Russian centre for zinc. The old German equipment has now been replaced and today produces more than half Russia's zinc metal.

Production Estimates

Since the revolution no zinc statistics have been issued. Estimated at some 130,000 tons in 1950, production is officially reported to have doubled by 1955 and to have risen a further quarter by 1957. In 1958 it was probably between 300 and 350,000 tons.*

There have also been striking developments in mine production since the war and Russia claims to have the largest proved resources of zinc and lead in the world. Although high grade zinc ores have been found, those worked at present are comparatively poor. New deposits are being mined in Kazakhstan, which now supplies much of Russia's concentrates and elsewhere.** Nearly a quarter of all zinc ores are obtained by open-cut mining. In general, zinc is found in association with lead but

in the Urals zinc-copper ores are mined and in Kazakhstan the zinc ores also contain substantial quantities of lead and copper.

Concentrates go to the nearest smelter or refinery, except those from Eastern Siberia which are shipped via the Suez Canal to the Black Sea for refining in the Ukraine. Mine production in the Urals is insufficient for the local refinery which also draws supplies from Kazakhstan.

The U. S. S. R. imports about 100,000 tons (gross weight) a year of concentrates from North Korea as well as small shipments from Bulgaria and Iran. Zinc is also being recovered at several slag fuming plants working on residues.

Now, how does the Russian industry compare with that in the West?

New Electrolytic Plants

First, nearly all production comes from comparatively new electrolytic plants of standard design, only the old works in Siberia using the horizontal retort process. The Russians stressed the importance of good working conditions. From what we saw and heard, the processes are well understood but the plants which are designed by GIPROTSVETMET (Designing and Research Institute for Non-Ferrous Metals) have few novel features. The complexity of the ores makes recovery difficult and metal recovery and also productivity are, however, not so high as in the West, although improvements are constantly being made. Indeed, the most impressive feature of the Soviet industry is the amount of research being conducted on methods of production and the enthusiasm of the technicians and management. The Academy of Sciences and GINTSVETMET (the Institute of Non-Ferrous Metals) do fundamental and practical research on a larger scale than seems possible in other countries. Although no startling discoveries have yet been made, much competent work has been done on fluo-solid roasting, the treatment of complex ores and continuous casting techniques. At present the electrothermic process is being examined for possible use in special circumstances but the electrolytic process has been

* The estimated capacities of the various plants are as follows: Ust-Kamenogorsk, 130,000 or more tons; Ordzhonikidze, 50,000 or 70,000 tons; Chelyabinsk, 45,000 to 55,000 tons; Belovo, 35,000 to 45,000 tons; and Konstantinovka, 27,000 tons.

** The Uzbek Republic, Eastern Siberia and Tadzhikistan.

standardized even where power has to be generated from coal.

The price of zinc includes delivery all over the Union and there are discounts or premiums according to grades. Production costs, of course, vary from plant to plant, but they cannot be related to those of the West. Electro metal (99.95% Zn) is sold for 3360 Roubles a ton, skilled workers receiving from 800 to 1800 roubles a month. The official rate of exchange is regarded as being unrealistic at four Rb to the dollar.

Zinc fabrication is not so advanced as in the west, being perhaps less susceptible to central planning than production. Consumption in 1958 probably exceeded 300,000 tons, and in addition some semi-fabricated zinc was imported from Poland as we shall see later.

The manufacturers of the end-product make most of the components they need and there does not appear to be an organized semi-fabricating industry as we know it. The smelter despatches his metal according to instructions and has little contact with the end-user. Brass and galvanizing are the main uses, although there are as yet no continuous strip galvanizing lines. Zinc oxide is also important since it is the principal white pigment for paints; titanium dioxide is not yet available. Die casting, which is done mainly by automobile manufacturers, is comparatively undeveloped and special high grade zinc is not obtainable. There were no signs of sheet zinc being used in building. Indeed zinc could have been used with advantage for many purposes in a lot of products seen in Russia.

Industry Organization

A word now on organization. Since 1957 industry has been decentralized and over a hundred National Economic Councils have been set up with wide powers in their areas. The old Ministry of Non-Ferrous Metals has been abolished together with some other central production ministries. However, the GOSPLAN (All-Union Planning Committee of the U. S. S. R. Council of Ministers) probably the largest government department in Russia, is still responsible for economic planning and for the overall co-ordination of production and consumption. It employs many experts on non-ferrous metals.

The State Scientific and Technical Committee of the Council is of special interest. It embraces the functions of the A.Z.I. and the Z.D.A. and indeed performs similar services for all Russian industry. Its object is to coordinate technical developments and disseminate to industry the latest infor-

mation from Russia and abroad. It publishes journals and books, forms study groups on special problems, makes films and arranges for the exchange of information and visits with other countries—which all seem very

enlightened functions for a government department.

Since we visited Russia, a new body, the Science-Economic Council, has been set up to advise on scientific and economic planning. It is purely

World Zinc Ore Production

	(Recoverable metal content) (1000 metric tons)			
	1955	1956	1957	1958
U. S. S. R.	210*	250*	270*	290*
Poland	110*	110*	100*	100*
Bulgaria	50*	50*	55*	55*
North Korea	50*	50*	50*	50*
China	14*	14*	14*	14*
Yugoslavia	60	58	58	60
Canada	393	383	374	385
Mexico	269	249	243	225
Peru	153	178	156	143
Argentina	21	21	30	30*
Others (S. America)	29	24	24	24*
Algeria	25	27	24	28*
Morocco	35	36	43	41*
Tunisia	4	4	3	4*
Belgian Congo	68	100	83	85*
N. Rhodesia	35	35	37	34
S. W. Africa	21	25	27	18*
Japan	108	123	136	142
Australia	261	283	296	263
India	3	7	9	7
Burma	8	8	10	10*
France	9	10	10	12
Germany (Federal Republic)	92	92	94	85
Italy	83	93	97	114
Finland	21	39	43	47
Spain	91	86	80	81
Sweden	46	52	52	56
Others	20	25	30	30*
European total	367	397	406	425
Total (excluding U. S. A.)	2,294	2,432	2,448	2,433
U. S. A.	467	492	472	406
World Total	2,761	2,924	2,920	2,839

* Partly estimated.

World Primary Zinc Production

	(1,000 metric tons)			
	1955	1956	1957	1958
U. S. S. R.	260*	300*	320*	340*
Poland	150	154	154	156
Czechoslovakia	20*	20*	20*	20*
China	14*	14*	14*	14*
Yugoslavia	14	20	30	32
Canada	238	232	224	226
Mexico	56	56	57	57
Peru	17	9	29	29
Argentina	13	14	14	14
Belgian Congo	35	42	49	51*
N. Rhodesia	28	29	30	31
Japan	113	136	138	140
Australia	103	105	110	115
Belgium-Luxembourg	212	231	236	214
France	112	113	131	148
Germany (Federal Republic)	180	191	185	181
Italy	71	74	74	74
Netherlands	28	29	30	27
Austria	1	8	10	9
Norway	44	48	48	45
Spain	24	23	22	20*
U. K.	83	83	78	76
European total	755	800	814	794*
Total (excluding U. S. A.)	1,816	1,931	2,003	2,019
U. S. A.	934	958	959	740
World total	2,750	2,889	2,962	2,759

* Partly estimated.

consultative and is directly responsible to the Council of Ministers.

Russia, an importer and exporter of zinc metal, is said by Russian experts to be a net importer but the available figures do not bear this out. It was also implied that exports to the West have been made solely to earn foreign currency. There is much trade in zinc inside the Communist bloc. Soviet imports from Poland were about 50,000 tons of zinc metal in 1955 and 1956 and lower in 1957 and 1958. Soviet exports made at world prices (about 1000 Rb a ton at the official rate of exchange) have, however, been expanding from 35,000 tons in 1955 to 72,000 in 1957, but seem to have declined in 1958. An increasing proportion has been going to the West, which received 40,000 tons in 1957 compared with 15,000 in 1955.

Some concentrates were also sent to Western Europe last year.

Are these exports likely to grow in the future? Obviously, no definite answer is possible, since the complete control exercised over production and consumption makes it simple to send temporary surpluses, or indeed to divert supplies, to foreign markets.

But all the signs point to a tremendous increase in Russian home needs, since the new Seven Year Plan aims at raising Russian standards to the present level in the U. S. A. The Plan however provides for increasing zinc production by 60 per cent in the period, by building two new plants (in Kazakhstan and the Uzbek republic) and enlarging others. I think consumption is likely to rise more than production and Russia might well become a bigger importer of zinc. Nev-

ertheless, as new plans come into operation, temporary surpluses might continue to occur and be exported to obtain badly needed foreign currency.

Outlook by Countries

In Poland, foreign currency is even scarcer and so great efforts are being made to foster exports.

The Polish industry was based on the rich Silesian ore deposits, the largest centre of zinc mining in Europe since 1860. By 1913 metal production was nearly 200,000 tons a year, but during the depression years of the 1930's several of the old plants were closed and by 1938 output had fallen to 110,000 tons a year. During the war, some plants were damaged and it was not until 1950 that production regained its pre-war level. It has continued to grow and in 1958 was some 156,000 tons.†

There are five zinc plants, all in the neighborhood of Katowice. Three are old horizontal retort smelters and the largest operates both the electrolytic and horizontal retort processes. The other plant is a new electrolytic refinery erected after the war to the designs of the Russian Design Institute. Today 40 per cent of Polish production is electrolytic. Recent visitors to Poland have been impressed by the technical equipment but have reported that the industry, like that in Russia, is less efficient than in the West.

Part of Poland's production is now based on imported concentrates; in 1957 some 150,000 tons (gross weight) were imported, mainly from Bulgaria (77,000), North Korea (24,000) and Italy. Vast deposits of oxidized zinc ore were recently discovered in the search for oil and natural gas and attempts are now being made to find suitable methods for using this material.

Poland is a traditional exporter of zinc and zinc products, both within the Communist bloc and to the Western world. Total exports of metal, sheet and plates have been fairly steady over the past three years at just under 100,000 tons. Russia is the largest customer, but Czechoslovakia (about 12,000 tons in 1958), the U. K. and Germany are also important markets. To encourage exports, home consumption (some 55,000 tons a year) is restricted. Poland makes zinc alloys and oxides which she has been sending in increasing quantities to the West in recent months.

It is impossible to forecast the future trends of these exports, but a Polish spokesman has recently claim-

Total Consumption of Zinc by Uses 1958

	—U. S. A.*— 1000 metric tons	—U. K.— 1000 metric tons	—Germany— 1000 metric tons	—France— 1000 metric tons
Galvanizing	44	30	27	26
Die Casting	32	16	7	7
Rolled Zinc	5	8	22	26
Brass	12	31	34	19
Zinc Oxide	2	9	10	12
Miscellaneous	5	6	31	10
	750	305	300	279

* Primary Zinc.

World Primary Zinc Consumption

	(1,000 metric tons)	1955	1956	1957	1958
U. S. S. R.		275*	305*	320*	330*
Poland		60*	58*	62*	62*
East Germany		20*	20*	20*	20*
Czechoslovakia		45*	48*	46*	48*
China		14*	14*	14*	14*
Yugoslavia		8	8	14	14*
Others		12*	12*	12*	12*
Canada		53	56	47	51
Mexico		13	13	14	16
Others (S. America)		37	37	31	30*
South Africa		19	23	24	18*
India		35	36	52	58
Japan		108	130	129	136
Australia		73	72	78	73
Belgium-Luxembourg		95	95	100	93
France		160	157	163	178
Germany (Federal Republic)		220	216	225	235
Italy		55	61	68	62
Netherlands		20	20	28	30
Austria		11	10	11	10
Denmark		6	5	6	6*
Finland		8	5	7	7*
Norway		14	14	14	14
Spain		24	24	23	23*
Sweden		29	25	24	25
Switzerland		17	17	18	15
U. K.		225	232	235	226
Others		8	8	8	8
European total		892	889	930	932
Total (excluding U. S. A.)		1,664	1,721	1,793	1,814
U. S. A.		1,018	917	840	750
World total		2,682	2,638	2,633	2,564

* Partly estimated.

† The estimated capacities of the plants are as follows: Szopienice, 80,000 m. tons of which 45,000 is electrolytic; Boleslaw, 40,000 tons electrolytic; Welnowice, 25,000; Lipiny, 20,000 tons; and Kunegunde, 15,000 tons.

ed that consumption will soon overtake production which is planned to rise to 200,000 tons a year.

Czechoslovakia has two horizontal distillation plants, located near the Polish border (about 20,000 tons a year). This metal is consumed in Czechoslovakia, whose heavy engineering and automobile industry consume some 48,000 tons of zinc a year.

In **China** metal is produced by the vertical retort plant built by the Japanese in Manchuria before the war. Output is estimated to have been some 14,000 tons in 1958, all from ores mined in China. The Chinese were the first to produce zinc metal and are said now to be experimenting with a blast-furnace process. Prospecting is also said to be increasing.

I have already spoken of the mine production in Bulgaria where it is reported that a Russian designed refinery is soon to be built. No similar plants have been announced for Korea.

To sum up. The Communist countries together produced in 1958 about 570,000 tons of metal, almost all from ores mined inside the bloc. Consumption was nearly 500,000 tons, exports to the West taking about 70,000 tons.

Yugoslavia can conveniently be considered here in view of its close association with the Communist bloc. Metal production has been rising steadily and in 1958 was 32,000 tons, more than double 1955. About half is exported, mainly to the West and Middle Eastern countries, and some 25,000 tons of zinc concentrates were shipped in 1957 and 1958. Some concern is being felt at the decline in the metal content of ore in Yugoslavian mines. New mines are being opened and new equipment installed.

Before turning to Europe, where important developments are also taking place, let us look at zinc in other continents. I need deal only briefly with the two Americas with which you are already familiar, since much of their production comes to the U. S. A. with whom they also have close financial ties.

North and South America

Mine production in **Canada** is the second largest in the world and has been at the rate of 380,000 tons a year since 1955. Exports of concentrates to the U. S. have been rising but the quotas will cause some curtailment of production. Metal production at some 230,000 tons a year has been fairly steady, but again the quotas will limit normal sales to the U. S. A. which has been taking 40 per cent of both mine and metal production. The quotas, by tending to isolate the U. S. market (to which Ca-

nadian prices are related), have also caused problems of pricing.

Consumption has followed U. S. trends. Despite recovery in 1958 to 51,000 tons, it is still below 1956 levels (56,000). The continued decline in brass was offset by gains in galvanizing, die casting and zinc oxide. The home market is being energetically developed by the Canadian zinc companies, who use material supplied by the British and U. S. Development Associations.

Mexico, another close neighbor of the U. S. has also been hard hit by the quotas. The U. S. takes 75 per cent of Mexican mine production which has declined since 1955 by 20 per cent (44,000 tons) to 225,000 tons last year. Some 40 per cent of smelter production, which has been steady at about 56,000 tons, also goes to the U. S. A. Consumption, although small, has been rising and reached 16,000 tons in 1958, against 13,000 tons three years ago.

Nearly all the concentrates exported by **Peru** also go to the U. S. Mine production has again been falling and has dropped by 15 per cent (30,000 tons) in the last two years to 143,000 tons, a decline which is expected to continue as long as world production exceeds demand. The rate has been accelerated by the imposition of quotas which will cut exports severely. However, metal production, which is almost entirely exported, has trebled to 29,000 tons in the same period, but, since the price of zinc has dropped, production of lower grade metal has been suspended and nearly all output is now of special high grade.

Argentina, which produces some 15,000 tons of metal a year from domestic concentrates, consumes it all at home.

Australia, India and Japan

On the other side of the world, Australia, India and Japan present a somewhat different picture since all have important and growing home markets.

Australia consumes more zinc per head than any other country except Belgium, which exports many of the zinc products she makes. Australia takes well over 70,000 tons a year or nearly 16 lb. per head compared with 10 lb. in the U. S. A. last year.

It has some of the most important zinc deposits in the world. In 1958 mine production was 10 per cent lower (35,000 tons) at 263,000 tons than in 1957. About half was exported, going largely to the U. K. and Belgium. Metal production, rising steadily, reached a record level of 115,000 tons. Soon it will be increased; a new plant, using the Imperial Smelt-

ing blast-furnace process, is being built at Cockle Cree in N.S.W. with an output of 30,000 tons and the existing refinery in Tasmania will be extended when more power is available.

Low commodity prices caused demand to fall last year, but long-term prospects are good. Galvanizing, which now takes 46,000 tons a year, will expand when the continuous strip galvanizing plant now being built starts up. Die casting, for which special high grade zinc is now being made in Australia, uses 8,000 tons a year and is growing rapidly to meet the requirements of the booming local automobile industry. Great efforts are also being made to expand sheet zinc for roofing.

Small quantities of metal go to the U. K. and the U. S. A. but there is no quota for zinc. The main exports of metal go to the growing Asian market, particularly India where rapid industrialization is taking place.

In **India** consumption has increased by 60 per cent in the last three years (from 35,000 tons in 1956 to 58,000 tons in 1958). Many new developments are under way — 3 continuous strip mills are being built to British, German and Russian design and the associated galvanizing could take another 20-30,000 tons of zinc a year. Tube galvanizing and rolled zinc are also growing, but die casting has been developing more slowly.

So far no large zinc deposits have been found in India but prospecting continues and the Himalayas might yield great wealth. Although there has been talk of building a smelter, definite steps have yet to be taken. The present mine production (7,000 tons of zinc concentrates) goes to Japan for smelting on toll, all other requirements being met by imports of metal for which great competition has developed. Australia and Belgium are the main suppliers, but Russian imports, which can be paid for in Indian rupees are becoming more significant (5,000 tons in 1958).

Japan has no such currency problems and is indeed one of the few countries which seems almost to achieve a zinc balance. Mine production, which is steadily expanding, reached 140,000 tons in 1958, and it satisfies the needs of the zinc smelters, which produce 140,000 tons — only a few thousand tons more than the rising consumption (which has grown from 108,000 tons in 1955 to 136,000 tons in 1958). Vigorous promotional work based on British and American films and publications are stimulating consumption, which is expected to rise by a further 40 per cent

by 1962. Production is being increased accordingly but it seems likely that Japan will become an importer of concentrates.

Brass takes 20,000 tons a year and die casting, which is rapidly expanding, more than 5,000 tons. A special feature is the galvanizing of sheet and strip which took 70,000 tons of zinc in 1958, 50 per cent of the total. Five strip mills have been built in the last five years and five more will be set up in the next five years. The Japanese sheet galvanizing industry which uses much thin gauge steel is second only to the U. S. A. and is active in export markets, particularly in the Far East and Africa.

Africa

Much of Africa, on the other hand, is still mainly dependent on Europe, at least economically and will remain so for some time. **Northern Rhodesia**, whose metal production has risen slowly to 30,000 tons in 1958, sends most of it to **South Africa** where consumption is growing. Exports to Britain have consequently declined. In **South West Africa** the U. S. owned mine, whose exports go mainly to the U. S., severely curtailed production in 1958 (to 18,000 tons compared with 26,000 tons in the previous year). The **Belgian Congo** and the newly independent North African countries send all their concentrates to Europe, although Congo metal production, which has risen from 35,000 tons in 1955 to over 50,000 tons in 1958 goes mainly to the U. S. and other parts of the world.

In dealing so briefly with Africa, which is not yet important for zinc, one should not overlook the tremendous political and economic changes which are taking place. Africa is a growing market for zinc and its products and will surely yield more zinc as the continent is developed.

Europe

The recovery of Europe since the war has been one of the outstanding achievements of our time. Nowhere else in the free world has industrial production grown so rapidly in recent years. New political and economic experiments in collaboration have also been started which are changing the structure of Europe as we know it. Before considering them, let us see how zinc has expanded in Europe in recent years.

The picture in 1958 seems very similar to that of the U. S. A. Together the European countries consumed some 932,000 tons of zinc produced 794,000 tons and, if the African

territories** are included, mined 580,000 tons.

The U. K. and Western Germany were the main consumers, using 560,000 tons, two-thirds of European consumption. In the U. K. a set-back in sheet galvanizing caused a fall of some 9,000 tons last year but other uses grew. The pattern of consumption in the U. K. differs somewhat from that in Germany, France, Belgium and Holland where rolled zinc is still the major outlet.

In Germany industrial production continued to rise and last year for the first time the use of primary zinc, but not total consumption, was greater than in the U. K. In France too, it has risen appreciably, to 178,000 tons in 1958 compared with 160,000 tons in 1955. In most other European countries there were small declines owing to deflationary government policies and for Europe as a whole the level of consumption was the same as in the previous three years.

However, the pattern of end-uses is slowly changing.

Die casting has increased steadily by 10 per cent a year to over 100,000 tons in 1958. In the U. K. it was at a record level of nearly 50,000 tons. Germany is the next largest consumer (21,000 tons) followed by France (19,000). A new strip galvanizing line started in the U. K. in 1958 and when Germany's first line begins soon there will be 14 lines in Europe, six of them being in France and four in the U. K. But 1958 was not a good year for European sheet galvanizers. Home markets shrank and competition, mainly from Japan, increased in export markets.

In France more rolled zinc was again used in building and consumption rose to 72,000 tons in 1958. In Germany, this use is steady at about 70,000 tons.

Statistically Europe is almost self-sufficient in zinc metal. Since 1955 production has grown from 755,000 tons to 794,000 tons in 1958 (production was 815,000 tons in 1957). Nevertheless there is a considerable trade in zinc metal both with the outside world and between the European countries. Belgium, Italy and Norway, the net exporters, send metal all over the world.

Belgium, entirely dependent on imports of zinc concentrates, is the largest producer and is closely followed by Germany. But in both countries, and indeed in Europe as a whole, lower prices have recently caused some reduction in output. Only in France was there any substantial increase in zinc metal production last year. Duties and taxes, intended primarily to pro-

tect the French franc zone (the French and North African mines which in 1958 provided some 55 per cent of France's ore requirements), also encouraged the construction of new smelting capacity. Metal production has risen from 112,000 tons in 1955 to 148,000 tons in 1958.

The U. K. is the only large consumer entirely dependent on imports. It smelts one-third (80,000 tons) of its requirements from concentrates imported from Australia, Newfoundland and Burma. Its metal requirements come mainly from Canada and Belgium and recently U.S.S.R. supplies have grown in importance.

European mine production (425,000 tons last year), has risen steadily since 1955 as increases in Italy, Sweden and Finland have more than offset cutbacks in other countries during 1958. The Belgian Congo and North Africa provide a further 160,000 tons, the remaining 40 per cent of Europe's requirements being imported mainly from Australia, Canada and Peru.

Spain, not yet a member of the O.E.E.C., deserves separate mention. Mine, (some 80,000 tons) and metal (20,000 tons in 1958) production declined in 1958 but two new refineries of a combined capacity of about 35,000 tons are now being built. Consumption remains steady at 23,000 tons a year.

Despite many ups and downs co-operation in Europe has grown since the war. Nine-tenths of the trade between members of the Organization for European Economic Cooperation, set up originally as part of the Marshall plan, has now been freed and since 1948, it has increased by more than 120 per cent compared with little more than 50 per cent in the rest of the world.

The Common Market

Eleven years ago Belgium, the Netherlands and Luxembourg formed the "Benelux" customs union in which eventually there were to be no restrictions at all on trade between members. Its success led to further and bolder experiments, the most notable of which was the European Coal and Steel Community. Its members, the Benelux countries, plus France, Germany and Italy, abolished restrictions on the movement of coal and steel; thus these two basic industries became Europeanized.

The Six countries then agreed to extend this cooperation to all forms of trade and in March 1957 signed the Treaty in Rome which provided for the gradual abolition of tariffs and quotas between the Six and the eventual merging of their economies. Trade

** The mine production of the Belgian and French franc zones — the Belgian Congo, Algeria, Morocco and Tunisia.

is to be completely freed within 12-15 years when capital and workers will also move without restriction. The Treaty came into effect on the 1st of January 1959, when the first steps—the reduction of all tariffs between member countries by 10 per cent and the expansion of quotas—were taken.

The Treaty envisages the political as well as the economic integration of the Six and so ultimately the creation of a supra-national Union. Common policies will be adopted towards the outside world and for most products the customs tariffs will be the average of the individual existing duties. However, for some raw materials and products including zinc these common tariffs have not yet been agreed, and are still under discussion and indeed could remain unresolved for eleven years. It will be interesting to look at the problems which will confront the zinc industry as the Common Market gradually takes shape.

The Six consume some 600,000 tons of zinc and produce 650,000 tons (excluding the Belgian Congo), and so are at present statistically self-sufficient. Mine production, however, even if the overseas territories are included, is only 380,000 tons and substantial imports of ores are needed. But among the Six the problems of integration for zinc are bound to be difficult. This is because the Important French and Italian industries have grown up behind high protective barriers and will gradually be exposed to competition from the other members, especially Belgium which has thriven on free trade. The complexity of the problem is shown if we remember that Belgium owns much of the French industry and some of the German.

Nevertheless, the devaluation of the French franc last December made possible the removal of many restrictions. Thus the Paris zinc price, which had been 30 per cent above the London price is now only about 8 per cent higher and France is already beginning to play a greater role in intra-European trade. But France and Italy have called for a tariff of 12 per cent on imports into the Common Market compared with the arithmetical average of 7 per cent. Other members are expected to oppose this level and perhaps no decision will be reached for some years. There is a possibility that zinc will be protected in the Common Market even though it may well become increasingly dependent on outside supplies of zinc. In any case its important semi-fabricating industries need metal at an economic price to compete in world markets.

The Six, with a population of 165 million, is one of the most rapidly ex-

panding industrial areas in the world and zinc consumption could rise by 50 per cent or more in the next five or six years. Imports of perhaps 250,000 tons a year would then be needed unless production were substantially increased. Whatever may happen for zinc metal, imports of concentrates must grow.

While the prospects for the Common Market are exciting, its members subscribe to entirely opposed economic theories and much depends on their ability to reconcile the tenets of protectionism and free trade and to compromise.

Conclusions

What has our survey shown? Above all that production and consumption are continuing to grow but the rate of progress and the problems facing zinc—mainly oversupply—differ from country to country.

Outside the U.S.A. mine production has exceeded smelter production which in turn has been greater than consumption and so world prices have fallen. The burden of over production fell mainly on the U.S.A. and those countries which are dependent on world trade. Most of the cuts in Europe and elsewhere seem to have affected Prime Western quality. Only France, Japan and Russia increased production substantially in 1958. Consumption, however, was still rising in most countries but not so rapidly as in previous years. In Europe after a lull in 1958 it is now expanding again, although in France it has been temporarily checked. Spectacular growth in India is an exciting portent of what the future will hold when other undeveloped countries begin their industrialization.

In the Communist bloc industrial expansion has been more rapid than elsewhere. However, there is little evidence that the bloc will become a large net exporter of zinc since the prospects for consumption are bright; Russia still takes only 4 lb. per head of population compared with 10 lb. in the U.S.A. It is to be expected that the efficacy of central planning in raising production will impress many of the uncommitted, underdeveloped countries in Asia and Africa.

Unfortunately the Free World presents a much less coherent picture and one which may not inspire the newly independent countries, who can hardly fail to observe that countries and blocs in the West tend to seek unilateral solutions to common problems. Thus, for example, even the U.S., the leader of the Free World, felt obliged last year to restrict imports of zinc from its traditional suppliers and although this paradoxically raised world prices

temporarily, it caused hardship, especially to countries whose prosperity depends on growing exports of primary metals.

The European Common Market which has a substantial trade with the undeveloped countries is also becoming an object of suspicion in independent Africa and other primary producing countries who see it as a new instrument of European power. Furthermore if its members were to discriminate against other European countries as well, it is hardly too much to say that the economic and political unity of Western Europe would be in peril. If the market were to become inward-looking and restrictive in its commercial policies, there is a great danger that Europe might be split and many of the advantages of post-war cooperation might be lost. I think that these fears are exaggerated and that the Common Market will prove a great stimulus to European and world trade.

The U.K. and the British Commonwealth are very alive to the dangers of such a split. Mine production in the Commonwealth is 710,000 tons, metal 450,000 and consumption 430,000 tons, and indeed if it were to act as a unit it could be comfortably self-sufficient in zinc for many years. But such protectionism is contrary to the liberal trading policies of the much maligned Commonwealth preference area in which after all duties on zinc are almost negligible. If the Free World is to match the efforts of the Communist bloc, it must be prepared to broaden its views so that economic production, so essential for its future, is free to prosper. Here it is worth mentioning that during the year the United Nations has held two meetings attended by over 30 countries to consider world zinc problems, and great interest was shown. There is to be a further meeting in New York next week, and a study group might be formed to keep world zinc and lead problems under review. Notwithstanding our present problems I see many reasons for being confident about the future of zinc. First, of course, is the fact that in very few parts of the world does consumption per head approach that of the U.S. Furthermore India, Japan and Australia, as well as the Common Market and other European countries are expanding rapidly and a recovery in the U.S. could soon lead to an all-round increase in the Americas. Our problem might even become one of shortages in a few years.

Secondly, promising new develop-

(Continued on Page 16)

U.K. CONFIDENCE IN COPPER NOT FULLY RESTORED AFTER END OF THREAT OF U. S. STOCKPILE SALES

Soviet Wire Demand Disappears; Buffer Stock Manager Disposing of Tin In Narrow Range Over £780; Lead, Zinc Interest Centers on UN Meeting

May 6, 1959

THE copper market here has not been by any means easy to read in recent weeks.

At the beginning of April when prices were in the region of £250 a ton, it was still believed that heavy buying pressure by U. S. consumers prior to the critical wage negotiations with American producers would continue at any rate until about the end of May. In fact, however, when the U. S. custom smelter price rose to 34 cents a pound, buying interest wilted and about the same time the London market was subjected to a fair amount of selling pressure from a quarter usually associated with producing interests.

As a result, during the first half of April prices on the open market declined about £12 a ton and when reports emerged of the possibility of some sales of copper from the U. S. supplemental stockpile, sentiment further weakened and prices at one time dipped to fractionally below £230 a ton.

Although, as a result of the prompt action by U. S. Senators from the mining States, the threat of sales from the stockpile was removed, confidence was not notably restored and after a small temporary rally, quotations have sagged again to little more than £230 for cash. It is noteworthy that throughout the price gyrations of the last two or three months both upward and downward, European consumers have shown surprisingly little interest beyond taking in material against their period contracts.

There is, no doubt that both in the U. K. and Germany and possibly in some other countries the disappearance of Russian demand for wire has been a severe blow to wire mills this year but in other directions British consumption is keeping up pretty well and the same seems to be true of Germany.

The French situation, however, is not a very encouraging one at the moment.

Everything hinges on the question of whether there is to be any serious loss of production through strikes either in the U. S., Chile or elsewhere. American consumers have undoubt-

By L. H. TARRING
London, England

edly done a fair amount of stocking up against the possibility of a stoppage in production though so far they do not seem to have built up as big reserves as some people had thought they would.

Although the Budget introduced here by the Chancellor of the Exchequer in April was generally expansionist in tone and was welcomed by virtue of the tax concessions it contained, it could hardly be expected to have an immediate effect on copper consumption. If the latter holds steady over the remainder of the year, it is perhaps as much as one can reasonably expect, although there are still some hopes that in the second half some modest improvement may occur. If there should not be any strikes to curtail production after June 30, it looks very much as if the current rate of world production is in excess of total industrial needs and a top-heavy situation could develop later in the year.

However, the International Wrought Non-Ferrous Metals Council held a further meeting on May 5 at which some producers were represented when further discussions are believed to have taken place on the possibility of producers adopting a more flexible production policy based on more up to date and more comprehensive statistics of the consuming end provided by the fabricators.

This, however, is a big and rather controversial subject and only one facet of the general desire to see greater stability in copper prices.

A number of producers still hold to the view that the producers themselves should have a much greater say in determining the level at which their production should be sold and this question is likely to flare up from time to time as the search for a solution acceptable to all parties goes on.

Tin Prices Stable

The stability of tin prices during the past month leaves little room for comment on this aspect of the situa-

tion. It is obvious that the Buffer Stock manager has continued to dispose of metal at only a very narrow margin over the pivotal price of £780 and from the persistent drop in official Metal Exchange warehouse stocks—amounting to something like 500 tons a week—it is assumed that Buffer Stock holding are being lightened at the rate of about 2,000 tons a month.

Whether all the recent drop in U. K. warehouse stocks should be attributable to Buffer Stock selling is, perhaps, arguable as in the early stages it is believed that some of the withdrawals represented smelters' sales to the American continent and a good demand is still reported from the U. S. A. for Cornish tin.

This view would seem to be borne out to some extent by the remarks of Sir Ewen Fergusson, chairman of the Straits Trading Co. when he said it might not be wide of the mark to suggest a figure of 20,000 tons as the present holdings of the Buffer Stock. He went on to suggest a continuance of export control at current rates would see the stock liquidated in the first half of next year.

Whether in fact it is desirable to see the whole of the stock liquidated is perhaps arguable especially as the present 5-year agreement does not terminate until the middle of 1961.

UN Lead Conference

The main feature of interest during the past month has been the change in the climate of opinion regarding the outcome of the third UN conference on lead and zinc in New York. Early in April it still looked here as if there was very little chance of agreement on any positive action to limit supplies to the world market but shortly prior to the opening of the conference, indications of some softening in the Canadian attitude resulted in a much more hopeful view being taken. The outcome is still in doubt as this report is being written and in any case it will probably be quite some time before any governmental action can be implemented.

However, it is certainly very significant that lead producers in different parts of the world have, within the

AVERAGE BRITISH PRICES FOR COPPER, TIN, LEAD, ZINC

(Per Long Ton)

Mean of Bid and Asked Cash Quotation at Close of Morning Session on London Metal Exchange

	COPPER			TIN			LEAD			ZINC		
	Cash	3 Months	Settlement	Cash	3 Months	Settlement	Current Month	3rd Following	Current Month	3rd Following	Current Month	3rd Following
1954 Averages	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1955 Averages	248 17 11	239 17 7	249 0 11	719 8 11	709 17 7	720 6 7	98 8 12	94 7 4	78 5 4	77 16 11	90 13 4	89 12 3
1956 Averages	328 14 5	324 13 1	329 1 8	787 14 9	774 7 7	788 13 3	116 6 5	114 8 9	97 14 3	95 3 7	81 11 7	80 1 1
1957 Averages	219 8 10	221 0 3	219 12 10	754 15 4	747 10 10	755 3 11	96 12 9	96 13 2	81 11 7	80 1 1	81 11 7	80 1 1
1958 Averages	171 7 5	174 0 5	171 10 11	730 15 5	725 0 3	731 0 5	72 3 4	72 10 11	62 11 4	62 3 7	62 11 4	62 3 7
January	162 17 9	164 2 11	163 0 9	731 11 0	732 2 9	731 17 6	74 3 7	74 0 6	63 17 2	63 10 11	63 17 2	63 10 11
February	170 2 9	171 4 5	170 5 11	731 5 9	735 13 1	731 12 5	74 15 9	74 11 3	63 9 9	63 11 2	63 9 9	63 11 2
March	175 12 0	176 18 6	175 15 0	731 0 3	729 18 6	731 7 6	72 17 5	73 0 4	62 7 6	62 11 7	62 7 6	62 11 7
April	178 15 11	180 15 1	178 19 1	730 15 11	733 19 6	731 1 5	72 2 9	72 9 6	61 17 1	62 5 3	61 17 1	62 5 3
May	194 12 3	196 3 8	194 15 6	730 5 6	732 16 8	730 10 6	73 5 6	74 3 1	64 3 6	64 13 0	64 3 6	64 13 0
June	199 16 4	200 11 8	199 19 9	731 4 4	733 4 2	731 9 7	71 9 8	72 19 2	63 11 11	64 5 6	63 11 11	64 5 6
July	205 16 3	206 1 2	205 19 6	730 9 0	731 11 0	730 15 0	70 7 8	71 17 1	63 16 8	64 11 4	63 16 8	64 11 4
August	209 6 3	209 8 6	205 9 1	718 2 11	719 17 1	719 19 1	70 10 5	71 17 1	65 0 8	65 7 9	65 0 8	65 7 9
September	236 5 9	229 15 5	236 13 1	740 16 9	735 11 6	741 8 3	74 1 0	74 11 6	70 9 4	69 10 10	70 9 4	69 10 10
October	242 19 6	236 11 9	243 4 3	757 12 6	759 3 9	758 0 6	75 11 8	75 16 9	75 5 6	72 16 1	75 5 6	72 16 1
November	220 19 11	220 14 8	221 2 10	756 9 1	758 1 2	756 16 2	72 4 1	72 6 7	74 6 10	71 5 1	74 6 10	71 5 1
December	197 13 3	197 9 3	197 16 11	734 18 6	734 17 11	735 6 1	72 15 8	73 6 10	65 17 12	65 10 12	65 17 12	65 10 12
1959												
January	230 2 0	227 5 10	230 5 0	758 15 6	759 4 9	759 2 10	71 17 0	72 3 3	74 17 8	72 18 8	74 17 8	72 18 8
February	236 4 2	235 10 8	236 7 6	772 9 9	773 9 0	772 15 0	69 19 4	70 16 6	73 13 8	71 19 8	73 13 8	71 19 8
March	248 10 3	247 12 2	248 13 6	779 14 9	783 5 9	780 1 6	69 10 3	71 4 2	75 2 5	73 18 8	75 2 5	73 18 8
April	240 0 5	240 6 6	240 3 5	782 5 3	783 15 5	782 11 4	69 1 0	70 8 4	72 13 9	72 9 2	72 13 9	72 9 2

last week or two, announced appreciable cutbacks in production and/or exports.

This suggests that even if agreement at Government level is not easily arrived at some of the leading producers are determined to try and rectify the top-heavy world supply situation. This is really not very surprising considering the depressed state of the market in recent weeks and the indications of rising Metal Exchange warehouse stocks, which seem to suggest that the expected effect of the U. S. import quotas is at last becoming manifest.

In such market conditions consumer buying was naturally restricted but actual consumption in Europe has held up reasonably well—though not perhaps fully matching the corresponding period of last year.

Zinc Supply Situation

In broad outline, the comments with regard to lead apply equally to zinc except that in the case of zinc the European supply situation has appeared less easy than that of lead and prices have been rather quicker to respond to the recent expectations of something being done on an international basis to adjust the supply situation.

Moreover, in zinc, in one direction at least, consumption has continued at an excellent level, namely in zinc alloy die casting while in other directions it has held its own pretty steadily and galvanizing has begun to look a slightly more promising outlet than for some time past. Here too, the decision by several leading producers to cut back production and/or exports has not been without its effect, although obviously it will be quite a long time before these decisions are reflected in the level of arrivals of concentrates or metal in Europe.

There is naturally anxiety in Europe that the restrictions on imports into the U. S. A. should not be intensified.

U. K. COPPER STATISTICS

During February U. K. production of refined copper was 8,224 tons of primary and 7,780 tons of secondary compared with 6,463 tons and 9,047 tons respectively in January, according to the British Bureau of Non-Ferrous Metal Statistics. Stocks rose during the month to 56,100 tons of refined and 9,775 of blister (59,827 tons and 9,971 tons respectively as at the end of January). Consumers held 34,068 tons (28,622 tons) of refined stocks. Full consumption details are given below:

Unalloyed Copper	Feb. 1959	2 mos. ending Feb. 1959
Products	1959	1959
Wire (1)	17,635	43,246
Rods, bars & sections	1,525	3,471
Sheet, strip & plate	4,754	9,911
Tubes	4,709	10,078
Castings & miscellaneous	650	1,300
Alloyed Copper Products		
Wire	1,384	2,729
Rods, bars & sections	10,140	21,038
Sheet, strip & plate	7,771	15,907
Tubes	1,550	4,146
Castings & miscellaneous	5,911	12,974
Copper sulphate	3,273	5,611
Total all products	59,302	130,411

Copper content of	Feb. 1959	2 mos. ending Feb. 1959
output	48,293	108,063
Consumption of refined copper (2)	35,775	84,344
Consumption of copper & alloy scrap (3)	12,518	23,719
(copper content)		25,682

Notes: (1) Consumption of H. C. copper and cadmium copper wire rods for wire and production of wire rods for export.
(2) Virgin and secondary refined copper.
(3) Consumption of copper in scrap is obtained by the difference between copper content of output and consumption of refined copper, and should be considered over a period since monthly figures of scrap consumption are affected by variations in the amount of work in progress.

U. K. LEAD STATISTICS

Lead stocks in the U. K. at the end of February were 43,542 tons (35,626 tons imported and 7,916 tons English refined) as against the January total of 45,102 tons (40,339 tons and 7,763 tons), according to the British Bureau of Non-Ferrous Metal Statistics. February production totaled 6,150 tons compared with the January total of 6,286 tons. Full consumption details are given below:

	Feb. 1959	2 mos. ending Feb. 1959
Cables	7,236	18,449
Batteries—as metal	2,411	4,982
Battery oxides	2,198	4,719
Tetraethyl lead	1,624	3,296
Other oxides & compounds	2,281	3,828
White lead	559	1,497
Shot (inc. bullet rod)	307	758
Sheet & pipe	4,784	10,862
Foil and collapsible tubes	261	772
Other rolled and extruded	505	981
Solder	1,116	2,223
Alloys	1,589	2,952
Miscellaneous uses	1,097	2,143
Total consumption	25,968	57,462
of which:		
Imported virgin lead	13,328	30,272
English refined	5,238	12,905
Scrap including re-melted	7,402	14,285

U. K. ZINC STATISTICS

According to the British Bureau of Non-Ferrous Metal Statistics U. K. stocks of zinc rose from 34,804 tons at the end of January to 36,850 tons at the end of February. Of the February total consumers held 17,056 tons. U. K. production was 5,542 tons, an increase over the January total of 5,297 tons. Full consumption details are given below:

	Feb. 1959	2 mos. ending Feb. 1959
Brass	7,992	16,343
Galvanizing	7,600	14,829
of which: General	2,611	5,496
Sheet	2,110	3,210
Wire	1,461	3,596
Tube	1,418	2,527
Rolled zinc	2,131	4,123
Zinc oxide	2,249	5,008
Zinc diecasting and forming alloy	4,018	8,296
Zinc dust	847	1,657
Miscellaneous uses	839	1,922
Total all trades	25,676	52,178
of which:		
Slab zinc		
High purity (99.99%)	4,355	9,365
Electrolytic & high grade (99.95%)	4,946	10,539
G.O.B. Prime Western & debased	9,738	18,909
Other virgin material	180	593
Remelted zinc	431	832
Scrap—(Zinc content)		
Zinc metal, alloys & residues	2,612	5,521
Brass & other copper alloys	3,414	6,419

U. K. TIN STATISTICS

According to the British Bureau of Non-Ferrous Metal Statistics tin consumption during February was 1,614 tons compared with 1,769 tons the previous month. Production of primary tin dropped to 1,677 tons (plus 36 tons of secondary) against the January figure of 2,925 tons (30 tons). Stocks in the U. K. at the end of February showed a decline at 14,715 tons from the January total of 16,744 tons. Details of consumption of primary tin are given below:

	Feb. 1959	2 mos. ending Feb. 1959
Tinplate	713	1,499
Tinning:		
Copper wire	49	92
Steel wire	9	14
Other	61	127
Total	119	233
Solder	194	299
Alloys:		
Whitemetal	255	477
Bronze & gunmetal	163	420
Other	34	74
Total	452	971
Wrought tin (1)		
Foil & sheets	20	52
Collapsible tubes	21	55
Pipes, wire & capsules	3	9
Total	44	116
Chemicals (2)		
(2)	92	167
Other uses (3)		
(3)		16
Total all trades	1,614	3,301

Notes: (1) Includes Compo and 'B' metal.
(2) Mainly tin oxide. (3) Mainly powder.

METALS, MAY, 1959

U. S. LEAD PRICE UP 0.50c, ZINC FIRMS; OUTLOOK FOR BOTH METALS BRIGHTENS AS UN ANNOUNCES CUTBACKS

Excitement in Copper Subsidies as Gov't Backs Down on DPA Stockpile Sales; Aluminum Output Rises; Tin Improves; Quicksilver Stronger; Silver Steady

May 15, 1959

L EAD and zinc shared the metal market spotlight during the month in review while copper relaxed after the commotion in the Capital on the proposed DPA stockpile sales.

The big news in lead and zinc was the United Nations conference which was followed by reports of voluntary cutbacks in output and exports of both metals. The UN committee estimated that the lead surplus for 1959, originally estimated at 150,000 tons, had been whittled down to an annual rate of 59,000 tons in the second half of this year, with the zinc surplus slashed from 120,000 tons previously to only 16,000 tons.

On the same day of the UN announcement, May 7, lead was boosted 0.50c to 12.00c a pound at New York following improved demand. Zinc prices firmed but were unchanged on the basis of 11.00c East St. Louis for the Prime Western grade. Copper prices held during the month in review, with producers at 31.50c and custom smelters at 32.00c.

Two large primary aluminum producers announced increases in output to meet present market demands for the metal. Tin in recent trading displayed a firmer tone, notably for near-by positions. Quicksilver showed a bit more strength, while platinum and silver were steady.

Copper Market Steady

Copper consumers were buying only moderate tonnages from custom smelters at 32.00c a pound delivered and would like to place more business with the large primary producers who were pricing their shipments at 31.50c. Dealers in the outside market have had no opportunity of late to quote, and if they had any inquiries they would have had to ask a shade above the 32.00c level.

Custom smelters were not pressing too hard for business since their intake of scrap has been small. Smelters were bidding for scrap copper on May 15 on the basis of 26.25c a pound for No. 2 heavy copper and wire.

Refined copper statistics for April follow in tons, with the March totals in parentheses: production, 137,490

(140,928); deliveries to domestic fabricators, 135,233 (124,220), and stocks at end of month, 74,323 (82,952).

The domestic deliveries of 135,000 tons indicated that there has been a shifting of stocks from producers' hands to the fabricators'. The latter have taken the large deliveries, it is believed, because their customers, the end users, bought heavily in anticipation of a possible strike in the copper industry at the end of June. If there is no strike, the end users probably will have enough fabricated products to tide them over during the greater part of the third quarter so that the brass and wire mills are likely to experience a falling off in business during that period.

If there is a strike, some factors in the industry are of the opinion that there will be sufficient foreign copper entering the U. S. to alleviate the probable shortage here. World production, it is pointed out, is at an all-time high. While the stocks of refined copper in the hands of domestic producers have been decreasing, the reverse has been the trend abroad. Beginning with November of last year, each month has shown a gain in foreign stocks and in the six-month period (November-April) the foreign stocks have increased by 111,000 tons.

Barring work stoppages here and abroad, there is every indication that the world's crude output in 1959 will run considerably ahead of consumption.

Strauss' Views on Copper

The extreme copper price fluctuations, so prevalent in the past, are not likely to recur in the future, Simon D. Strauss, American Smelting and Refining Company vice president, told the 37th annual meeting of the Copper and Brass Research Association. Mr. Strauss based his conclusion on the fact that there is more than adequate supply of copper to meet consumers' needs. On the basis of the production figures for the 1959 first quarter, Mr. Strauss estimated that this year's world output of copper is likely to reach 3,280,000 tons as compared with the previous record of 3,035,000 tons in 1957.

He said that assuming that the present business recovery continues, it is reasonable to expect that in the next two or three years deliveries of copper to U. S. fabricators may rise well above the previous ceiling of around 1,500,000 tons annually.

On the Labor Front

Not enough workers have as yet returned to their jobs in the Tacoma, Wash., refinery of the American Smelting and Refining Co. to enable the plant to operate. Men who went out on strike on March 13 have been drifting back to work. The management was hopeful that enough will have returned shortly to enable the refinery to blow in its furnaces. Tacoma refines about 5,000 tons of copper a month.

Union officials in Salt Lake City have moved to reopen the contract with Kennecott Copper, with actual negotiations slated shortly. The International Union of Mine, Mill and Smelter Workers indicated that the union will hold out for a "substantial general wage increase," a wage escalator clause, a supplementary unemployment benefit plan, and a reduction in the work week from 40 hours to 32 hours with no reduction in pay. The industry also will have to negotiate with other unions, such as the United Steelworkers and the International Association of Machinists.

Lead at 12c New York

The 0.50c hike in the New York lead quotation to 12.00c on May 7 came as no surprise to the trade. There had been a veritable rush to buy lead at 11.50c; when the demand became too heavy sellers limited sales at 11.50c to the daily intake, and the excess tonnage requested was booked at the average price. When the demand persisted and custom smelters found themselves called upon to draw on their inventory that was accumulated at 12.00c a pound, the selling price was jacked up to that level.

It wasn't only the stepped-up consuming demand that forced the price rise. There also was the small intake of scrap by smelters of secondary metal that tightened the supply situation at the 11.50c price.

Demand for lead at 12.00c has held

up fairly well. Although there was considerable anticipatory buying at 11.50c a pound, consumers currently were still taking fair tonnages for shipment in May at the 12.00c spot New York price.

The lead industry factors shrugged off the action by the Agriculture Department in removing lead from the list of strategic materials eligible to be bartered for U. S. surplus farm crops. It was pointed out that barter has been a negligible factor in the lead market for a long time. In fact, it was previously disclosed that the Commodity Credit Corp.'s lead goal for the current fiscal year had been reached and no deals could have been consummated until July in any event.

Lead, Zinc Curtailments

American Metal Climax Inc., also announced curtailments in its lead and zinc production. Effective May 8, the company's Mexican lead and zinc production, or its sale of such production to world markets was reduced by 6,500 short tons of lead and 2,000 tons of zinc on an annual basis. And effective July 1 the company's production of slab zinc at its Blackwell, Okla., smelter will be reduced by about 4,000 tons annually. Jean Vuillequez, in making the announcement, noted that the company in its 1958 annual report had stated that "the only lasting cure for the lead and zinc industry here and abroad is to bring supply and demand into balance."

Andrew Fletcher, St. Joseph Lead Co. president, told the recent annual meeting that the company's lead and zinc sales were about in balance with the company's current production. He said that "if imports were controlled satisfactorily, our metal inventories would begin to be liquidated sufficiently rapidly so that we could shortly consider resuming a more normal level of operations."

Zinc Demand Improving

Demand for zinc has been improving, with buyers requesting that shipments be completed by June 15. The deadline on shipments probably reflects anticipation that there may be a steel strike and the users want the metal in the plants before the end of next month. An encouraging aspect of the demand was that the business, in most instances, was being placed at the spot quotation of 11.00c a pound East St. Louis for the Prime Western grade.

Statistics for April revealed a drop in slab zinc production; that, coupled with the fact that there was an increase in shipments and that the latter exceeded output, brought about a moderate reduction in surplus stocks,

the first such decrease since December, 1958.

April figures for all grades of zinc follow in tons, with the March totals in parentheses: production, 76,393 (79,918); domestic shipments, 78,358 (73,814); and stocks at the end of the month, 203,863 (206,083).

Straits Tin Higher

Prices for Straits tin continued to fluctuate almost daily but in recent trading there appeared to be an upward trend, mainly because of a tight supply situation for the spot through May positions. Consumers who placed orders insisted the metal be delivered in the first half of June. Consequently, sellers were holding on to their spot and prompt metal to make certain they will have the tin available for first-half June delivery.

Spot Straits tin on May 14 was quoted at 103.12½c a pound New York, as against the last previous quotation in this space of 102.50c for April 10. The high for the April 10-May 14 period was the 103.12½c registered on May 13 and 14. The low for the period was 102.12½c for May 17.

Boost Aluminum Output

Aluminum Co. of America and Reynolds Metals Co. have announced increases in their production of primary aluminum. Alcoa said the increase was in anticipation of an average increase in business over 1958, while a spokesman for Reynolds said the additional metal was needed to meet present market demand.

Alcoa is stepping up output by 40,000 tons annually, to about 624,000 tons a year, or some 20 per cent higher than last year's 520,000-ton output. The hike by Alcoa boosts its production rate to 82 per cent of its 798,250-ton-per-year installed capacity. Reynolds will increase its production by about 30,000 tons a year, bringing output up to an annual rate of 559,000 tons a year, equal to around 93 per cent of its present capacity of 601,000 tons annually.

Pricewise, primary aluminum was unchanged on the basis of 26.80c a pound for the 30-pound ingot, 99½ per cent plus grade, f.o.b.

Quicksilver Stronger

Spot quicksilver on May 5 climbed to a range of \$245 to \$249 per flask of 76 pounds, as against the last previously quoted range in this space of \$239 to \$240 per flask. Domestic demand has not been too pressing but the shortage of spot metal was more acute.

Platinum Steady

Platinum refiners held to their range of \$77 to \$80 per ounce, established on March 6. With dealers not willing to do business under \$75 an

ounce, the market ranged from \$75 to \$80 an ounce.

Silver Unchanged

The New York silver price was unchanged during the month in review, holding to the 91.37½c an ounce level established on March 4 as the result of an increase of 0.25c an ounce.

Zinc Outside the U. S.

(Continued from Page 12)

ments in zinc technology are a sound basis for such confidence. For example in Britain the Imperial Smelting blast-furnace process has now been in operation for several years and is to be used in the new plants now under construction in the U. K. (Swansea) Australia (Cockle Creek) and France. Pressure die casting, too, is growing all over the world, and since the war continuous strip galvanizing, which was developed in Europe during the 1930's has extended the uses of zinc coated steel. In all there are already nearly 30 lines outside the U. S. A. Zinc-rich paints, developed in Britain, are being made in other countries and applications are growing rapidly. Protective zinc anodes, in which your own institute has led the world, are now being adopted everywhere; and your new expanded research program gives us all great hope for the future.

Finally, I should like to draw attention to the high rate at which promotional work has been increasing all over the world and especially in Europe. My own Association has brought together experts from many countries to discuss ways of expanding zinc. In Italy, a new lead and zinc association, which has been formed with affiliated bodies for die casting and galvanizing, is operating with great energy; and another new association for zinc has been set up in Brussels by the Belgian, Netherlands and Belgian Congo producers. (These are some of our recent publications and those of our friends on the Continent.) Last year our Fifth International Galvanizing Conference in the Netherlands and Belgium was attended by 350 delegates from 20 countries and next year the European Die Casting Committee will hold its Third International Conference at Stresa in Italy.

It is indeed inspiring to observe the rapid growth of bonds between both zinc producers and users alike to promote zinc. All of us — and even the politicians — know quite well that unity makes strength. Untroubled by the passions of prestige, power politics and all such outmoded paraphernalia, unity and prosperity are within our reach if we are willing to work together even more closely on technical and promotional problems.

Daily Metal Quotations for April, 1959

The following quotations are taken from the Daily Metal Reporter*
(In Cents Per Pound)

APRIL	Copper			Tin Straits New York			Lead		Zinc		Alumi- num		Anti- mony		Silver (Cents Per Ounce) New York	
	Producers' Price	Custom Smelters' or Outside Price	Electro Refinery f. o. b.	Lake Del.	Aver. Prompt Electrolytic Export Price f. a. s. N. Y.	Spot	Prompt	New York	Outside St. Louis	Prime West. f. o. b.	Brass Spec. f. St. Louis	High Grade Delivered	Spec. High Grade Delivered	30-lb. Ingot (f. o. b.)		Domestic Spot 99.5% f. o. b. Laredo
1	31.50	34.00	32.35	31.50	33.125	102.625	102.625	11.00	10.80	11.00	11.50	12.00	12.25	26.80	29.00	91.375
2	31.50	34.00	32.35	31.50	33.375	102.875	102.875	11.00	10.80	11.00	11.50	12.00	12.25	26.80	29.00	91.375
3	31.50	34.00	32.35	31.50	33.25	102.75	102.75	11.00	10.80	11.00	11.50	12.00	12.25	26.80	29.00	91.375
6	31.50	34.00	32.35	31.50	33.25	102.875	102.875	11.00	10.80	11.00	11.50	12.00	12.25	26.80	29.00	91.375
7	31.50	34.00	32.35	31.50	32.75	102.625	102.625	11.00	10.80	11.00	11.50	12.00	12.25	26.80	29.00	91.375
8	31.50	34.00	32.35	31.50	32.75	102.50	102.50	11.00	10.80	11.00	11.50	12.00	12.25	26.80	29.00	91.375
9	31.50	34.00	32.35	31.50	32.50	102.625	102.625	11.00	10.80	11.00	11.50	12.00	12.25	26.80	29.00	91.375
10	31.50	33.00	31.85	31.50	32.25	102.50	102.50	11.00	10.80	11.00	11.50	12.00	12.25	26.80	29.00	91.375
13	31.50	32.00	31.35	31.50	31.50	102.25	102.25	11.00	10.80	11.00	11.50	12.00	12.25	26.80	29.00	91.375
14	31.50	32.00	31.35	31.50	31.50	102.25	102.25	11.00	10.80	11.00	11.50	12.00	12.25	26.80	29.00	91.375
15	31.50	32.00	31.35	31.50	31.50	102.50	102.50	11.00	10.80	11.00	11.50	12.00	12.25	26.80	29.00	91.375
16	31.50	32.00	31.35	31.50	30.50	102.25	102.25	11.00	10.80	11.00	11.50	12.00	12.25	26.80	29.00	91.375
17	31.50	32.00	31.35	31.50	31.00	102.125	102.125	11.00	10.80	11.00	11.50	12.00	12.25	26.80	29.00	91.375
20	31.50	32.00	31.35	31.50	31.50	102.25	102.25	11.50	11.30	11.00	11.50	12.00	12.25	26.80	29.00	91.375
21	31.50	32.50	31.60	31.50	31.50	102.375	102.375	11.50	11.30	11.00	11.50	12.00	12.25	26.80	29.00	91.375
22	31.50	32.50	31.60	31.50	31.625	102.375	102.375	11.50	11.30	11.00	11.50	12.00	12.25	26.80	29.00	91.375
23	31.50	32.50	31.60	31.50	31.375	102.25	102.25	11.50	11.30	11.00	11.50	12.00	12.25	26.80	29.00	91.375
24	31.50	32.50	31.60	31.50	31.50	102.375	102.375	11.50	11.30	11.00	11.50	12.00	12.25	26.80	29.00	91.375
27	31.50	32.50	31.60	31.50	31.25	102.50	102.50	11.50	11.30	11.00	11.50	12.00	12.25	26.80	29.00	91.375
28	31.50	32.50	31.60	31.50	31.25	102.75	102.75	11.50	11.30	11.00	11.50	12.00	12.25	26.80	29.00	91.375
29	31.50	32.50	31.60	31.50	31.125	102.75	102.75	11.50	11.30	11.00	11.50	12.00	12.25	26.80	29.00	91.375
30	31.50	32.00	31.35	31.50	30.75	102.75	102.75	11.50	11.30	11.00	11.50	12.00	12.25	26.80	29.00	91.375
AV.	31.50	32.84	31.77	31.50	31.87	102.505	102.505	11.20	11.00	11.00	11.50	12.00	12.25	26.80	29.00	91.375
HL	31.50	34.00	33.60	31.50	33.50	102.875	102.875	11.50	11.30	11.00	11.50	12.00	12.25	26.80	29.00	91.375
LO	31.50	32.00	31.10	31.50	30.50	102.125	102.125	11.00	10.80	11.00	11.50	12.00	12.25	26.80	29.00	91.375

* When split quotations prevail the daily average price is listed. The highs and lows for the month take into consideration the levels reached at both sides of each range.

United States Duties on Principal Ore and Metal Imports

(Including Revisions in Effect June 30, 1957, Under Geneva Agreements)

(Quantities Are in Pounds Unless Otherwise Stated; n.s.p.f. Stands for "Not Specially Provided For.")

COPPER

NOTE — The excise tax of 4c a pound on copper (which was reduced to 2c a pound by the Geneva Trade Agreement) was suspended in April, 1947, until March 31, 1949, and on expiration it was further suspended until June 30, 1950. The tax was reimposed on July 1, 1950. It was suspended again on May 22, 1951, retroactive to April 1, 1951, and until February 15, 1953, and again until June 30, 1954. Suspension further extended to June 30, 1955, and again until June 30, 1958. If import tax is restored, the 1956 Geneva Agreement provides for 5% reductions effective on June 30 of 1956, 1957 and 1958, provided the price is above 24c; if the price is below 24c the 2c tax would prevail.

Copper ore and concentrates, usable as flux, etc., copper content	1.70c lb.
Copper ore and concentrates, product of Cuba, copper content	free
Copper ore and concentrates, product of Philippines, copper content	0.17c lb.
Copper ore and concentrates, copper content	1.70c lb.
Regulus, black, or coarse copper, and cement copper, copper content	1.70c lb.
Unrefined black, blister, and converter copper in pigs or converter bars, copper content	1.70c lb.
Refined copper in ingots, plates or bars, copper content	1.70c lb.
Copper rolls, rods or sheets	1 1/4c lb. (plus 1.70c lb. ††)
Copper seamless tubes and tubing	3 1/2c lb. (plus 1.70c lb. ††)
Copper plain wire	12 1/2% (plus 1.70c lb. ††)
Copper brazed tubes†	4.50c lb. (plus 1.70c lb. ††)
Old and scrap copper, fit only for remanufacture: and scale and clippings, copper content	1.70c lb.

†† Copper content.

BRASS

Brass rods, sheets, plates, bars, strips, Muntz or yellow metal sheets, sheathing, bolts, piston rods, shafting and bronze rods, tubes and sheets	2c lb.
Brass tubes and tubing, seamless	2c lb.
Brass tubes, brazed, angles and channels	6c lb.
Brass and bronze wire	12 1/2%

LEAD

NOTE — Import duties on lead-bearing ores, flue dust, and mattes of all kinds, lead bullion or base bullion, lead in pigs and bars, lead dross, reclaimed lead and antimonial lead were suspended February 12, 1952, and reimposed on June 26, 1952. Lead scrap duty was reimposed July 1, 1952.

Lead-bearing ores and mattes, n. s. p. f., lead content	3/4c lb.
Bullion or base bullion, lead content	1 1/16c lb.
Pigs and bars, lead content	1 1/16c lb.
Reclaimed, scrap, dross, lead content	1 1/16c lb.
Babbitt metal and solder, lead content	1 1/16c lb.
Pipe, sheets, shot, glaziers' lead, and wire	5/16c lb.
Type metal and antimonial lead, lead content	1 1/16c lb.
White lead	1.05c lb.
Litharge	1 1/4c lb.
Red lead	15/16c lb.
Orange mineral	1c lb.

ZINC

NOTE — Import duties on zinc-bearing ores, and on zinc in blocks, pigs and slabs were suspended February 12, 1952, and reimposed on July 24, 1952. Tax on old zinc and dross and skimmings reimposed July 1, 1953.

Zinc-bearing ores, except pyrites containing not more than 3% zinc, zinc content	6/10c lb.
Zinc contained in zinc-bearing ores, n. e. s., not recoverable, zinc content	6/10c lb.
Zinc, old and worn out, fit only for remanufacture	3/4c lb.
Dross and skimmings	3/4c lb.
Zinc in blocks, pigs or slabs	7/10c lb.
Zinc in sheets	1c lb.
Zinc sheets, plated with nickel or other base metal, or solutions	1 1/4c lb.

Zinc dust	7/10c lb.
Zinc die-casting alloys	12 1/2%
Zinc oxide and leaded zinc oxides containing not more than 25% lead, dry	3/5c lb.
ground in or mixed with oil or water	1c lb.

MISCELLANEOUS METALS AND ORES

Aluminum, metal and alloys, crude, except alloys elsewhere provided for†	1.25c lb.
Aluminum scrap	free
Aluminum plates, sheets, bars, rods, circles, squares, etc.†	2.50c lb.
Antimony ore, antimony content	free
Antimony metal and regulus	2c lb.
Antimony needle or liquidated	1/4c lb.
Antimony oxide	1c lb.
Antimony sulphides	1/2c lb. & 12 1/2%
Arsenic, metallic†	2.50c lb.
Arsenious acid or white arsenic	free
Bauxite, crude*	free
Bauxite, refined**	3/4c lb.
Bismuth	1 1/8%
Bismuth salts and compounds	35%
Beryllium metal†	21%
Beryllium ore	free
Cadmium	3 3/4c lb.
Cadmium flue dust, cadmium content	free
Chrome ore or chromite	free
Chrome or chromium metal†	10 1/2%
Cobalt metal	free
Cobalt ore and concentrates, cobalt content	free
Magnesium, metallic†	50%
Magnesium powder, sheets, wire†	17c lb. & 8 1/2%
Magnesium alloys	20c lb. & 10%
Magnesium scrap	free
Manganese ores, containing over 10% manganese, manganese content	1/4c lb., except Cuba, free
Molybdenum ore or concentrates, molybdenum content†	30c lb.
Nickel ore, matte and oxide	free
Nickel and alloys, nickel chief value, n. s. p. f., in pigs, ingots, shot, cubes, grains, cathodes, or similar forms	1 1/4c lb.
Nickel, bars, rods, plates, sheets, castings, strips, wire or electrodes	12 1/2%
Nickel scrap	free
Nickel tubes, tubing	6 1/4%
(if cold rolled, drawn or worked — 2 1/2% extra)	
Platinum, grain, nuggets, sponge and scrap, oz. troy	free
Platinum in ingots, bars, sheets, or plates, not less than 1/8 in. thick, oz. troy	free
Platinum, ores, platinum content, oz. troy	free
Quicksilver or mercury	25c lb.
Selenium and salts	free
Tantalum	12 1/2%
Tin ore, cassiterite, and black oxide of tin, tin content	free
Tin in bars, blocks, pigs, grain, granulated, and scrap, and alloys, chief value tin, n. s. p. f.	free
Tungsten ore or concentrates, tungsten content	50c lb.

*Crude bauxite import duty suspended through July 15, 1960. **Under Public Law 25 alumina imported for use in aluminum production is free for entries from July 17, 1956 through July 15, 1960. †Tariff reduced 5% on June 30, 1953, under Geneva Agreement which expires on June 30, 1959.

Copper Statistics Reported by Copper Institute

Combined Totals in U. S. A. and Outside U. S. A.

	Crude Production		(In tons of 2,000 pounds)		Deliveries to Refined Stock	Stock Increases or Decreases		
	Primary	Secondary	Refined Production	Customers	End of Period	Blister	Refined	Total
1957								
Total	2,897,719	123,270	3,035,588	2,853,307	458,340	-14,599	+103,920	+89,321
1958								
April	215,461	11,946	226,895	210,412	501,166	+ 512	+ 7,840	+ 8,352
May	218,387	11,190	225,771	212,993	498,516	+ 3,806	- 2,650	+ 1,156
June	214,283	11,414	228,387	240,825	476,823	- 2,540	-21,963	-24,233
July	216,315	9,516	229,578	220,801	475,164	- 3,747	- 1,659	- 5,406
August	224,673	9,474	217,914	247,116	436,476	+16,233	-38,688	-22,455
September	202,719	7,960	204,006	254,667	374,180	+ 6,673	-60,948	-54,275
October	204,938	20,613	192,199	292,630	269,654	+33,352	+105,126	-71,774
November	227,916	17,755	230,109	261,097	236,774	+15,562	-32,880	-17,318
December	253,512	8,883	282,191	260,841	258,874	-19,796	+22,100	+ 2,304
Total	2,707,926	138,696	2,805,622	2,916,588	258,874	+41,000	-199,466	-158,466
1959								
January	257,682	12,377	270,995	248,574	284,545	- 936	+22,001	+21,065
February	244,405	12,737	264,018	243,741	304,303	- 6,876	+19,578	+12,882
March	270,248	17,019	285,425	270,768	319,241	+ 1,842	+14,938	+16,780
April	266,090	15,405	278,959	270,262	329,871	+ 2,536	+10,630	+13,166

In U. S. A.

1957								
Total	1,116,380	112,060	1,616,964	1,277,946	181,024	.....	+60,379	.....
1958								
March	90,366	8,607	130,075	78,683	238,641	.....	+37,418	.....
April	86,123	11,475	120,467	81,930	251,099	.....	+12,458	.....
May	80,628	10,488	115,978	78,631	253,463	.....	+ 2,364	.....
June	71,092	10,980	107,918	100,796	244,450	.....	- 8,013	.....
July	64,444	8,858	110,130	77,523	242,781	.....	- 2,669	.....
August	67,917	8,999	100,640	86,982	215,560	.....	-27,221	.....
September	79,541	7,259	107,971	101,971	178,222	.....	-37,338	.....
October	92,214	19,865	113,288	120,793	128,490	.....	-49,732	.....
November	96,369	16,755	128,048	131,188	93,596	.....	-34,894	.....
December	97,641	7,911	146,978	116,310	80,722	.....	-100,302	.....
Total	1,008,170	131,294	1,446,540	1,179,416	60,722	.....	-12,874	.....
1959								
January	95,542	11,284	137,361	114,425	80,780	.....	+ 58	.....
February	88,432	11,425	142,235	120,134	85,523	.....	+ 4,743	.....
March	101,410	16,120	140,928	124,220	85,952	.....	- 2,751	.....
April	98,429	14,039	137,490	135,233	74,323	.....	- 8,629	.....

Outside U. S. A.*

1957								
Total	1,783,119	11,210	1,418,624	1,575,361	277,316	.....	+43,541	.....
1958								
March	157,606	365	129,082	151,258	254,685	.....	-13,839	.....
April	129,338	471	106,428	128,482	250,067	.....	- 4,618	.....
May	137,759	702	109,793	134,302	245,053	.....	- 5,014	.....
June	143,191	584	120,469	140,029	231,373	.....	-13,680	.....
July	151,871	658	119,448	143,278	232,383	.....	+ 1,010	.....
August	156,756	475	117,274	160,134	220,916	.....	-11,467	.....
September	123,178	701	96,035	153,633	196,558	.....	-23,610	.....
October	112,724	748	78,911	171,827	141,164	.....	-55,394	.....
November	131,334	980	102,061	129,909	143,178	.....	+ 2,014	.....
December	155,871	972	135,213	144,531	178,152	.....	+34,974	.....
Total	1,699,756	7,402	1,359,082	1,737,172	178,152	.....	-99,164	.....
1959								
January	162,140	1,093	133,634	134,149	203,765	.....	+21,943	.....
February	155,973	1,312	121,783	123,607	218,780	.....	+15,015	.....
March	168,838	899	144,497	146,548	236,232	.....	+17,502	.....
April	167,661	1,366	141,469	135,029	255,548	.....	+19,259	.....

* Excluding Russia, Yugoslavia, Norway, Sweden, Japan and Australia.

Electrolytic Copper

Producers' Price, Del. Valley
Monthly Average Prices
(Cents Per Pound)

	1956	1957	1958	1959
Jan.	43.00	36.00	25.69	29.00
Feb.	44.03	33.318	25.00	29.972
Mar.	46.00	32.00	25.00	31.14
Apr.	46.00	32.00	25.00	31.50
May	46.00	32.00	25.00	.....
June	46.00	30.955	25.36	.....
July	41.56	29.25	26.125	.....
Aug.	40.00	28.639	26.50	.....
Sept.	40.00	27.031	26.50	.....
Oct.	39.308	27.00	27.548	.....
Nov.	36.00	27.00	29.00	.....
Dec.	36.00	27.00	29.00	.....
Aver.	41.992	30.183	26.31	.....

Electrolytic Copper

Custom Smelters' Price, Del. Valley
Monthly Average Prices
(Cents Per Pound)

	1956	1957	1958	1959
Jan.	50.22	34.87	24.577	29.429
Feb.	52.07	32.273	23.557	30.361
Mar.	53.11	30.952	23.326	33.21
Apr.	48.88	31.24	23.66	32.84
May	44.221	30.163	23.865	.....
June	40.00	29.60	25.52	.....
July	38.14	28.39	29.231	.....
Aug.	39.32	27.862	26.52	.....
Sept.	39.00	25.948	26.355	.....
Oct.	37.192	25.722	28.577	.....
Nov.	35.95	25.435	29.829	.....
Dec.	35.45	25.26	28.846	.....
Aver.	42.797	28.93	25.905	.....

Lake Copper

Producers' Price Delivered
Monthly Average Prices
(Cents Per Pound)

	1956	1957	1958	1959
Jan.	43.00	36.00	25.69	29.00
Feb.	43.783	33.182	25.00	30.00
Mar.	46.00	32.00	25.00	31.14
Apr.	46.00	32.00	25.00	31.50
May	46.00	32.00	25.00	.....
June	46.00	30.955	25.00	.....
July	41.68	29.25	25.75	.....
Aug.	40.00	28.611	26.50	.....
Sept.	40.00	27.00	26.50	.....
Oct.	39.321	27.00	27.577	.....
Nov.	36.00	27.00	29.00	.....
Dec.	36.00	27.00	29.00	.....
Aver.	41.975	30.162	26.251	.....

Fabricators' Copper Statistics

(In tons of 2,000 pounds)

	Fabricators' Stocks of Refined Cop.	Unfilled Purchases of Refined by Fab. from Producers	Fabricators' Working Stocks	Unfilled Sales by Fabricators to Customers	Actual Copper Consumed by Fabricators	Excess Fabricators' Stocks Over Orders Bkd.
1953						
Total	380,881	25,022	309,664	170,917	1,375,869	— 74,678
1954						
Total	360,526	58,125	304,619	136,581	1,231,840	— 22,549
1955						
Total	.....	.....	.....	.....	1,418,241	.....
1956						
Jan.	457,679	115,295	338,818	221,975	117,427	+ 12,181
Feb.	445,679	114,981	338,488	204,154	115,867	+ 18,018
Mar.	440,706	112,893	336,856	198,517	119,440	+ 18,226
Apr.	435,216	110,792	335,829	178,814	119,441	+ 31,365
May	437,187	117,601	336,217	183,834	99,223	+ 34,737
June	.....	.....	.....	.....	.....	.....
July	.....	.....	.....	.....	.....	.....
Aug.	.....	.....	.....	.....	.....	.....
Sept.	.....	.....	.....	.....	.....	.....
Oct.	.....	.....	.....	.....	.....	.....
Nov.	.....	.....	.....	.....	.....	.....
Dec.	.....	.....	.....	.....	.....	.....
Total	.....	.....	.....	.....	1,416,378	.....
1957						
Jan.	435,635	107,231	335,944	178,326	119,517	+ 28,596
Feb.	422,266	110,174	334,542	178,913	114,298	+ 18,985
Mar.	429,410	104,551	338,454	164,623	106,170	+ 30,884
Apr.	429,708	98,838	335,921	164,410	117,041	+ 28,015
May	434,852	92,943	336,697	170,476	115,355	+ 20,622
June	426,905	82,919	340,743	153,042	110,527	+ 16,039
July	432,918	85,728	341,684	144,410	77,991	+ 32,552
Aug.	429,627	82,768	344,315	144,375	110,323	+ 23,826
Sept.	425,168	80,436	344,530	144,538	106,927	+ 16,536
Oct.	420,130	80,774	341,869	138,420	119,161	+ 20,615
Nov.	428,520	68,249	345,832	128,719	98,725	+ 22,218
Dec.	430,171	75,627	347,465	138,631	83,067	+ 19,702
Total	.....	.....	.....	.....	1,279,086	.....
1958						
Jan.	445,514	57,917	348,426	123,756	94,642	+ 31,249
Feb.	452,673	52,342	351,035	128,330	86,625	+ 25,650
Mar.	448,125	71,693	346,875	141,387	83,694	+ 31,556
Apr.	450,442	76,602	347,607	145,623	79,613	+ 33,814
May	441,001	78,194	346,404	138,190	88,447	+ 34,601
June	433,526	72,383	330,301	145,162	109,011	+ 30,448
July	431,796	77,362	326,263	153,529	79,353	+ 29,366
Aug.	421,931	78,194	323,667	150,436	96,717	+ 26,022
Sept.	416,887	71,025	319,281	145,390	105,474	+ 28,941
Oct.	399,113	91,019	315,929	156,692	138,017	+ 17,511
Nov.	419,914	88,580	328,238	157,799	110,487	+ 22,457
Dec.	447,123	90,401	326,438	177,869	92,573	+ 35,217
Total	.....	.....	.....	.....	1,165,364	.....
1959						
Jan.	457,387	101,182	337,761	172,698	108,556	+ 44,070
Feb.	459,046	123,321	390,522	183,113	116,565	+ 58,732
Mar.	445,810	130,785	334,904	211,547	136,890	+ 30,144

Scrap Copper Receipts by Custom Smelters and Refineries in United States*

(In Short Tons)

	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959
Jan.	15,763	6,640	4,528	6,486	9,859	11,047	14,322	17,506	16,024	14,511
Feb.	12,500	5,153	3,633	10,337	8,490	15,198	14,497	11,145	9,518	14,712
Mar.	13,538	7,912	5,243	19,991	9,738	12,198	15,921	13,934	11,783	19,522
Apr.	12,304	8,553	6,214	16,583	9,004	13,162	17,233	14,288	15,279	17,525
May	8,749	8,458	8,053	10,857	8,687	15,133	20,805	12,397	13,979	.....
June	20,523	8,828	4,425	10,945	13,309	14,765	14,758	11,949	13,945	.....
July	10,040	6,642	5,188	9,063	10,260	9,988	12,632	8,925	12,185	.....
Aug.	10,452	6,113	5,003	7,137	10,100	12,197	12,510	11,645	11,896	.....
Sept.	4,903	3,561	4,667	9,042	10,641	15,037	9,518	9,756	9,268	.....
Oct.	9,459	3,336	4,602	10,065	11,662	12,897	15,570	13,151	23,088	.....
Nov.	9,237	3,179	4,724	7,815	10,879	9,865	11,369	11,146	16,425	.....
Dec.	7,178	4,538	6,208	11,476	14,876	13,180	14,613	11,237	10,796	.....
Total	142,067	71,812	62,470	129,798	127,449	154,714	173,748	147,080	164,196	.....

* As compiled by Copper Institute.

Brass and Bronze Ingot Monthly Shipments

(NET TONS)

The following figures showing the combined shipments of ingot brass and bronze are compiled by the Ingot Brass and Bronze Industry and represent in excess of 95 per cent of the deliveries of the entire industry.

	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959
Jan.	19,466	18,874	28,416	28,315	23,423	20,661	25,201	27,736	25,681	20,468	22,046
Feb.	16,026	18,487	27,168	24,211	25,429	19,920	25,349	24,949	20,769	17,413	23,746
Mar.	14,550	22,404	31,097	35,890	28,256	23,653	29,713	28,310	21,948	18,825	26,109
Apr.	10,695	22,118	30,473	22,547	25,044	24,746	27,641	25,808	23,507	18,009	26,115
May	11,114	23,643	33,267	21,740	21,660	22,269	23,708	23,437	22,037	17,191	.....
June	9,696	25,093	33,817	21,274	20,818	22,348	23,141	18,842	18,888	17,962	.....
July	10,220	21,609	32,016	18,947	19,321	17,074	18,513	17,364	16,695	16,658	.....
Aug.	14,194	29,689	25,285	21,807	20,156	21,684	27,013	23,812	19,654	17,882	.....
Sept.	16,208	28,811	22,285	22,770	21,463	22,464	26,349	20,929	19,670	20,540	.....
Oct.	18,026	32,240	23,124	25,811	22,880	25,228	23,045	22,800	23,225	.....	.....
Nov.	18,488	31,748	23,544	23,441	21,806	23,061	25,102	21,818	19,767	.....	.....
Dec.	17,950	28,575	20,987	22,983	20,541	21,274	21,448	18,046	16,875	16,676	.....
Total	175,643	303,563	332,378	277,736	271,251	263,233	298,406	274,096	248,297	227,607	.....
Aver.	14,637	25,297	27,615	23,145	22,694	21,976	24,867	22,841	20,681	18,133	.....

Mine Production of Copper in United States

	(U. S. Bureau of Mines) (In short tons)			Total
	Eastern	Missouri	Western	
1956				
Ttl.	79,681	2,130	1,018,496	1,100,307
1957				
Sept.	6,083	132	79,623	85,338
Oct.	4,614	147	82,992	87,753
Nov.	7,063	70	80,848	87,981
Dec.	6,962	67	81,080	88,109
Ttl.	79,369	1,800	995,753	1,076,922
1958				
Jan.	7,615	164	82,476	90,255
Feb.	6,826	125	74,766	81,717
Mar.	7,517	123	79,594	87,234
April	7,035	161	76,911	84,107
May	6,522	152	71,717	78,391
June	5,801	155	62,296	68,252
July	4,188	132	56,672	61,222
Aug.	5,570	127	61,342	67,039
Sept.	5,312	114	77,561	82,987
Oct.	7,002	60	85,075	91,518
Nov.	6,617	60	87,379	94,056
Dec.	6,614	70	88,070	94,514
Ttl.	76,849	1,250	902,021	980,304
1959				
Jan.	6,590	126	90,386	97,102
Feb.	5,883	130	81,889	87,902
Mar.	6,513	140	91,383	98,036

Average Custom Smelters' Scrap Buying Prices

(Cents per pound for carload lots del. consumers' works)

	No. 1 Copper Scrap	No. 2 Copper Scrap	Light Copper Scrap	Refinery Brass*
1958				
Feb.	18.955	17.455	15.205	16.932
Mar.	19.21	17.71	15.46	16.92
Apr.	19.60	18.10	15.85	17.56
May	20.02	18.52	16.27	17.894
June	21.93	20.43	18.18	19.76
July	22.52	21.02	18.77	20.26
Aug.	22.62	21.12	18.87	20.12
Sept.	22.37	20.87	18.62	19.87
Oct.	24.80	23.30	21.05	22.30
Nov.	25.597	24.097	21.847	23.097
Dec.	24.356	22.856	20.606	21.856
Aver.	21.788	20.282	18.035	18.047
1959				
Jan.	25.29	23.79	21.54	22.79
Feb.	26.42	24.92	22.67	24.11
Mar.	28.79	27.29	25.04	26.79
Apr.	28.04	26.50	24.29	26.04

* Of dry content for material having a dry copper content in excess of 60%.

Brass Ingot Makers' Scrap Copper Buying Prices

(Average Prices)
(Cents per pound del. refinery for 60,000 lbs. of each grade)

	No. 1 Copper Scrap	No. 2 Copper Scrap	No. 1 Composition	Heavy Yellow Brass
1958				
Feb.	18.955	17.455	17.06	11.341
Mar.	19.21	17.71	17.274	11.88
Apr.	19.60	18.10	17.75	12.35
May	19.923	18.423	18.038	12.769
June	21.93	20.43	19.02	13.43
July	22.52	21.02	19.24	13.53
Aug.	22.62	21.12	19.11	13.80
Sept.	22.37	20.87	18.88	12.90
Oct.	24.80	23.30	20.51	14.938
Nov.	25.597	24.097	20.182	14.125
Dec.	24.356	22.856	19.038	13.038
Aver.	21.777	20.277	18.653	13.024
1959				
Jan.	25.29	23.79	19.70	13.982
Feb.	26.42	24.92	21.08	15.08
Mar.	28.79	27.29	22.85	16.85
Apr.	28.04	26.54	21.69	15.70

METALS, MAY, 1959

Lead Statistics Reported by American Bureau of Metal Statistics

Lead Refineries in U. S. A. and Outside U. S. A.

(Recoverable Lead Content in Tons of 2,000 Pounds)

Combined U. S. A. and Outside U. S. A.

	REFINED PRODUCTION			DELIVERIES			STOCKS		
	Pig	Antimonial Lead Content	Total	Pig	Antimonial Lead Content	Total	Pig	Antimonial Lead Content	Total
1958									
June ..	127,982	7,484	135,466	105,121	8,493	113,614	285,482	19,209	304,691
July ..	109,964	8,233	118,197	107,801	9,252	117,053	284,650	18,190	302,840
Aug. ..	103,701	8,973	112,674	102,898	9,903	112,801	284,818	17,260	302,078
Sept. ..	116,283	8,806	125,089	121,929	7,986	129,915	279,172	18,080	297,252
Oct. ..	121,934	10,656	132,590	139,698	9,408	149,106	262,510	19,328	281,838
Nov. ..	120,951	8,971	129,922	112,495	9,381	121,876	273,033	18,918	291,951
Dec. ..	129,461	10,898	140,359	90,498	8,583	99,081	313,232	21,233	334,465
Total ..	1,485,282	106,383	1,591,665	1,307,390	102,697	1,410,087	.....	.....	.....
1959									
Jan. ..	129,604	9,755	139,359	114,038	10,014	124,052	328,719	20,974	349,693
Feb. ..	114,528	8,944	123,472	90,915	9,094	100,009	347,455	20,824	368,279
Mar. ..	123,549	8,747	132,296	111,186	9,403	120,589	362,489	20,168	382,657
U. S. A.									
1958									
June ..	40,795	3,600	44,395	45,640	4,409	50,049	193,021	13,298	206,319
July ..	36,052	2,681	38,733	47,381	5,263	52,644	200,949	11,027	211,976
Aug. ..	34,275	4,890	39,165	50,145	4,956	55,101	201,750	11,150	212,909
Sept. ..	38,508	4,525	43,033	65,301	4,516	69,817	215,389	11,991	227,380
Oct. ..	40,225	5,153	45,378	70,580	4,455	75,035	207,335	12,728	220,063
Nov. ..	36,572	3,621	40,193	44,834	4,181	49,015	217,728	12,352	230,080
Dec. ..	39,504	4,307	43,811	31,869	3,737	35,606	239,049	13,417	252,466
Total ..	473,208	46,985	520,193	589,528	49,893	639,421	.....	.....	.....
1959									
Jan. ..	40,110	3,365	43,475	48,311	4,492	52,803	244,870	12,426	257,296
Feb. ..	35,084	4,145	39,229	40,881	4,073	44,954	254,229	12,961	267,190
Mar. ..	35,140	3,868	39,008	49,742	4,279	54,021	248,166	12,744	260,910
Outside U. S. A.									
1958									
June ..	87,187	3,884	91,071	59,481	4,084	63,565	92,461	5,911	98,372
July ..	73,912	5,552	79,464	60,420	3,989	64,409	83,701	7,163	90,864
Aug. ..	69,426	4,083	73,509	52,753	4,947	57,700	83,059	6,110	89,169
Sept. ..	77,775	4,281	82,056	58,628	3,470	60,098	63,783	6,089	69,872
Oct. ..	81,709	5,503	87,212	69,118	4,953	74,071	55,175	6,600	61,775
Nov. ..	84,379	5,350	89,729	67,661	5,200	72,861	55,305	6,566	61,871
Dec. ..	89,957	6,591	96,548	58,629	4,846	63,475	74,183	7,816	81,999
Total ..	1,012,074	59,398	1,071,472	717,862	52,804	770,666	.....	.....	.....
1959									
Jan. ..	89,494	6,390	95,884	65,727	5,522	71,249	83,849	8,548	92,397
Feb. ..	79,444	4,799	84,243	50,034	5,021	55,055	93,226	7,863	101,089
Mar. ..	88,409	4,879	93,288	61,444	5,124	66,568	114,323	7,424	121,747

Summary of Lead Statistics for United States

Recoverable Lead Content In Tons of 2000 Pounds	Stocks (end of period)				Smelter Receipts			
	Raw Material at Smelter	Base Bullion At Smelter & Transit	At Refinery and Process	Refined Pig and Antimonial	Total	Primary Origin U.S.A.	Outside U.S.A.	Scrap Total
1958								
June	77,858	4,420	28,254	206,319	316,851	30,230	14,022	1,315 45,567
July	81,103	4,848	30,065	211,976	327,992	23,440	19,665	1,629 44,734
August	75,116	4,794	33,863	212,909	326,682	23,898	13,145	1,269 38,312
September	70,290	4,948	32,606	227,380	335,224	21,775	14,937	1,673 38,385
October	58,863	4,773	29,833	220,063	313,532	19,630	9,205	3,699 32,534
November	60,222	3,573	30,208	230,080	324,083	23,603	15,932	3,869 43,404
December	68,197	4,489	28,955	252,466	354,107	25,544	18,921	4,090 43,555
Total .....	.....	.....	.....	.....	.....	297,687	191,415	29,080 518,182
1959								
January	69,015	4,243	31,577	257,296	362,131	24,931	19,185	3,167 47,283
February	58,921	2,919	35,062	267,190	364,092	22,934	8,435	1,772 33,141
March	65,478	4,283	33,815	260,910	364,486	22,258	21,368	1,426 45,052
Smelter Production								
1958								
June	43,662	40,795	3,600	44,395	45,640	4,409	50,049	52,644
July	40,328	36,052	2,681	38,733	47,381	5,263	52,644	55,101
August	41,099	34,275	4,890	39,165	50,145	4,956	55,101	69,817
September	42,473	38,508	4,525	43,033	65,301	4,516	69,817	75,035
October	41,975	40,225	5,153	45,378	70,580	4,455	75,035	49,015
November	41,365	36,572	3,621	40,193	44,834	4,181	49,015	35,606
December	39,972	39,504	4,307	43,811	31,869	3,737	35,606	639,421
Total	512,323	473,208	46,985	520,193	589,528	49,893	639,421	.....
1959								
January	45,938	40,110	3,365	43,475	48,311	4,492	52,803	52,803
February	40,655	35,084	4,145	39,229	40,881	4,073	44,954	44,954
March	38,138	35,140	3,868	39,008	49,742	4,279	54,021	54,021

United States Lead Statistics of Primary Refineries

(American Bureau of Metal Statistics)
(In tons of 2,000 lbs.)

	Stock At Beginning	Production Primary & Secondary	Total Supply	Stock At End	Domestic Shipments
1954	81,152	551,618	632,770	92,719	475,551
1955	28,855	547,153	639,872	31,089	531,339
1956					
Total		612,293	644,382		529,484
1957					
June	58,085	46,203	106,288	64,861	37,257
July	64,861	47,100	111,961	68,009	38,582
August	68,009	48,191	116,200	60,633	49,406
September	60,633	50,436	111,069	54,682	51,859
October	54,682	52,041	106,723	59,041	40,447
November	59,041	48,771	107,812	70,874	32,193
December	70,874	50,500	121,374	91,598	24,108
Total		604,353	645,534		463,060
1958					
January	91,598	47,665	139,263	101,206	33,422
February	101,206	47,133	148,339	119,522	23,832
March	119,522	43,441	162,963	128,754	28,885
April	128,754	40,984	169,738	143,136	22,172
May	143,136	47,487	190,623	155,121	30,021
June	155,121	44,636	199,757	163,504	32,078
July	163,504	38,827	202,331	164,860	31,948
August	164,860	39,520	204,380	169,302	34,254
September	169,302	43,269	212,571	170,666	41,657
October	170,666	45,467	216,133	169,435	46,647
November	169,435	40,485	209,920	179,321	30,591
December	179,321	44,042	223,363	198,538	24,852
Total		522,956	614,554		380,359
January	198,508	43,652	242,160	208,874	33,035
February	208,874	39,498	248,372	214,946	30,685
March	214,946	39,238	254,184	210,524	40,980

In instances where the figures are not in balance it is due to shipments to other than domestic consumers.

Lead Prices at New York

(Common Grade)
Monthly Average Prices
(Cents per pound)

	1956	1957	1958	1959
Jan.	16.16	16.00	13.00	12.619
Feb.	16.00	16.00	13.00	11.583
Mar.	16.00	16.00	13.00	11.42
Apr.	16.00	16.00	12.00	11.20
May	16.00	15.385	11.712	....
June	16.00	14.32	11.24	....
July	16.00	14.00	11.00	....
Aug.	16.00	14.00	10.85	....
Sept.	16.00	14.00	10.89	....
Oct.	16.00	13.704	12.673	....
Nov.	16.00	13.50	13.00	....
Dec.	16.00	13.00	13.00	....
Aver.	16.013	14.66	12.114	....

Lead Sheet Prices

(To Jobbers, Full Sheets)
Monthly Average Prices
(Cents per pound)

	1956	1957	1958	1959
Jan.	21.66	21.50	18.50	18.119
Feb.	21.50	21.50	18.50	17.083
Mar.	21.50	21.50	18.50	16.92
Apr.	21.50	21.50	17.50	16.70
May	21.50	20.885	17.212	....
June	21.50	19.82	16.74	....
July	21.50	19.82	16.50	....
Aug.	21.50	19.50	16.35	....
Sept.	21.50	19.50	16.39	....
Oct.	21.50	19.204	18.173	....
Nov.	21.50	19.00	18.50	....
Dec.	21.50	18.50	18.50	....

Industrial Classification of Domestic Lead Shipments

(American Bureau of Metal Statistics) (In tons of 2,000 lbs.)

	Cable	Amm.	Foil	Batt'y	Brass Making	Sun- dries	Job- bers	Unclass- ified
1956								
Total	72,418	27,599	2,622	88,461	3,960	52,994	13,084	270,251
1957								
Sept.	6,354	1,350	135	6,303	230	5,038	1,339	26,270
Oct.	7,988	1,715	135	7,108	286	4,955	1,493	21,574
Nov.	6,096	2,351	....	8,556	226	5,573	792	23,755
Dec.	6,440	1,449	85	8,832	160	7,258	394	23,573
Total	80,360	24,501	1,435	70,614	3,158	56,851	13,213	274,716
1958								
Jan.	5,297	2,800	200	6,896	671	4,002	1,191	19,503
Feb.	5,103	1,450	350	6,549	508	4,820	625	18,112
Mar.	5,956	752	....	6,479	686	4,614	1,064	18,674
April	6,731	2,250	....	6,242	909	2,958	1,040	17,453
May	6,976	2,200	120	4,705	270	3,871	634	16,558
June	3,726	2,250	75	3,762	666	5,071	1,087	20,620
July	5,249	1,650	105	5,332	566	5,310	1,110	19,360
Aug.	5,406	2,250	220	6,165	650	6,246	1,403	27,066
Sept.	4,880	2,700	295	6,722	850	5,782	891	29,739
Oct.	3,671	3,300	205	5,973	881	4,203	847	21,367
Nov.	2,950	2,500	85	3,126	493	3,800	706	18,533
Dec.	2,499	1,350	36	2,820	270	2,607	529	13,997
Total	58,444	25,452	1,691	64,761	7,420	53,284	11,127	240,881
1959								
Jan.	2,938	550	70	4,775	521	5,173	801	18,594
Feb.	2,899	1,750	70	5,124	90	1,643	888	11,368
Mar.	3,133	1,200	35	4,711	681	3,149	908	15,068
April	3,207	900	70	3,138	580	2,831	533	10,913
May	3,216	1,850	35	4,671	866	3,071	1,027	15,285
June	3,463	1,950	35	2,767	480	4,217	1,716	17,450
July	3,169	1,250	275	3,936	515	4,157	1,052	17,594
Aug.	3,481	2,415	70	4,992	400	6,399	100	16,397
Sept.	4,132	2,290	320	5,775	848	6,771	1,747	19,774
Oct.	3,243	2,450	....	4,548	285	6,210	1,641	28,270
Nov.	3,690	2,150	50	6,527	360	4,887	822	12,105
Dec.	2,267	2,100	50	6,216	215	2,578	652	10,774
Total	38,838	20,855	1,080	57,180	5,841	51,086	11,882	193,592
Jan.	2,284	2,100	100	5,594	161	3,545	727	18,524
Feb.	2,988	1,225	50	5,254	735	2,706	931	16,796
Mar.	3,156	1,850	105	5,905	378	6,006	2,185	21,395

Battery Shipments

The following table shows replacement battery shipments in the United States as compiled by the Business Information Division of Dun & Bradstreet, Inc., for the Association of American Battery Manufacturers:

(In thousands of units)

	1956	1957	1958	1959
Jan.	2,058	2,638	2,004	2,672
Feb.	1,340	1,961	1,803	1,791
Mar.	1,348	1,254	1,577	1,386
Apr.	1,368	1,178	1,242	....
May	1,761	1,605	1,454	....
June	1,807	1,878	1,773	....
July	2,178	2,469	2,101	....
Aug.	2,571	2,856	2,333	....
Sept.	2,711	2,688	2,704	....
Oct.	3,015	3,042	2,976	....
Nov.	2,592	2,359	2,262	....
Dec.	2,265	2,015	3,036	....
Total	25,014	25,943	25,265	....

METALS, MAY, 1959

Lead Stocks at Primary U. S. Smelters and Refiners

(American Bureau of Metal Statistics)
(In tons of 2,000 lbs.)

	In ore and matte and in process at smelters	—In base bullion (lead content)— At smelters & refineries	In transit to refineries	In process at refineries	Refined pig lead	Anti- monial lead	Total Stocks
1957							
Feb. 1..	80,451	10,636	4,061	25,827	32,418	10,487	163,880
Mar. 1..	81,274	11,880	4,394	25,728	38,479	10,220	171,975
Apr. 1..	82,461	14,598	3,593	25,401	36,390	9,794	172,237
May 1..	81,061	17,035	2,705	20,890	48,053	9,391	179,135
June 1..	81,364	11,585	3,071	21,002	48,286	9,799	175,107
July 1..	82,730	12,036	3,560	22,380	55,358	9,503	185,567
Aug. 1..	97,111	11,479	2,532	22,917	59,348	8,661	202,048
Sept. 1..	84,205	13,029	2,667	22,439	51,080	9,553	182,973
Oct. 1..	80,662	11,905	3,175	20,351	44,467	10,215	170,775
Nov. 1..	76,230	14,220	2,538	18,695	47,460	11,581	170,724
Dec. 1..	65,341	11,646	3,547	21,867	59,755	11,119	173,275
1958							
Jan. 1..	79,362	11,019	2,779	23,154	79,741	11,857	207,912
Feb. 1..	79,738	11,510	3,678	24,535	88,517	12,689	220,667
Mar. 1..	79,588	9,546	3,670	22,834	107,213	12,309	235,250
Apr. 1..	83,185	10,692	2,187	21,766	116,610	12,144	246,584
May 1..	86,053	11,838	2,138	20,524	130,668	12,468	263,689
June 1..	79,482	11,059	2,010	20,188	141,967	13,154	267,860
July 1..	80,060	9,012	1,570	22,092	150,648	12,856	276,238
Aug. 1..	83,347	12,438	860	21,615	154,378	10,482	283,379
Sept. 1..	77,416	14,767	1,176	20,444	158,413	10,889	283,105
Oct. 1..	72,724	14,797	2,223	18,125	159,662	11,004	278,535
Nov. 1..	61,819	11,492	1,086	19,041	157,385	12,050	262,873
Dec. 1..	62,960	11,072	1,565	20,941	167,493	11,828	275,859
1959							
Jan. 1..	72,378	10,917	1,767	19,746	185,913	12,595	303,316
Feb. 1..	72,832	10,565	1,889	21,317	197,085	11,789	315,477
Mar. 1..	62,383	11,707	1,447	21,479	202,835	12,111	311,962
Apr. 1..	68,433	14,352	350	20,575	198,459	12,065	314,234

Receipts of Lead in Ore and Scrap

By U. S. Smelters (a)

(American Bureau of Metal Statistics) (In tons of 2,000 lbs.)

	—Receipts of lead in ore—			Receipts of lead in scrap etc. (b)	Total receipts in ore, & scrap
	United States	Foreign	Total		
1953 Total	351,183	155,788	506,971	42,994	549,965
1954 Total	336,291	158,081	494,372	49,864	544,236
1955 Total	341,595	172,966	514,561	42,996	557,557
1956 Total	368,499	192,318	560,817	55,925	616,792
1957					
February	31,410	15,059	46,469	4,564	51,033
March	33,445	18,813	52,258	3,058	55,316
April	31,343	13,042	44,385	2,848	47,233
May	32,138	12,324	44,462	3,431	47,893
June	29,896	19,592	49,488	2,272	51,760
July	29,585	17,936	47,521	2,893	50,414
August	29,225	18,774	47,999	3,190	51,189
September	26,479	13,757	40,236	4,375	44,611
October	29,342	13,782	43,124	4,386	47,510
November	25,809	17,251	43,060	3,258	46,318
December	27,105	26,610	53,715	3,791	57,506
Total	356,409	206,901	563,310	42,537	605,847
1958					
January	25,537	22,097	47,634	3,507	51,141
February	23,789	16,400	40,189	2,184	42,373
March	21,735	20,038	41,773	3,154	44,927
April	25,104	15,821	40,925	1,913	42,838
May	27,427	10,228	37,655	1,867	39,522
June	28,577	13,811	42,388	1,366	43,754
July	22,289	19,692	41,981	1,615	43,596
August	22,984	13,043	36,027	1,252	37,279
September	20,654	14,576	35,230	1,765	36,995
October	18,678	9,093	27,771	3,577	31,348
November	24,024	14,541	38,565	3,933	42,498
December	24,366	18,804	43,170	3,982	47,152
Total	285,164	188,144	473,308	30,115	503,423
1959					
January	24,304	19,449	43,753	3,138	46,891
February	22,253	8,660	30,913	1,747	32,660
March	21,897	21,012	42,909	1,328	44,237

(a) Receipts of lead in ore are computed on the basis of recoverable lead. Owing to the estimational factor in this, which is probably on the low side, and also to the possibility that some lead receipts may escape attention, these monthly totals probably understate the actual production of pig lead. (b) Inclusive only of scrap smelted in connection with ore, plus some scrap received by primary refiners.

N. Y. Lead Price Changes

(Effective Date)

1951	Apr. 1....	13.75
Oct. 2..**19.00	Apr. 12....	14.00
1952	June 2....	14.25
Apr. 29....	June 15....	14.00
May 2....	Aug. 25....	14.25
May 12....	Sept. 7....	14.50
June 23....	Sept. 15....	14.75
June 24....	Oct. 4....	14.875
Oct. 7....	Oct. 5....	15.00
Oct. 14....	1955	
Oct. 22....	Sept. 23....	15.00-
Nov. 3....		15.50
Nov. 10....	Sept. 26....	15.50
Nov. 11....	Dec. 29....	16.00
Nov. 20....	1956	
Nov. 24....	Jan. 4....	16.50
Dec. 22....	Jan. 13....	16.00
Dec. 29....	1957	
Dec. 31....	May 9....	15.50
1953	May 16....	15.00
Jan. 7....	June 11....	14.00
Jan. 12....	Oct. 14....	13.50
Feb. 2....	Dec. 2....	13.00
Mar. 4....	1958	
Mar. 10....	Apr. 1....	12.00
Apr. 7....	May 14....	11.50
Apr. 16....	June 3....	11.00
Apr. 21....	June 18....	11.50
Apr. 29....	July 1....	11.00
May 18....	Aug. 13....	10.75
May 19....	Sept. 17....	11.00
May 26....	Sept. 30....	11.50
June 11....	Oct. 2....	12.00
July 20....	Oct. 8....	12.50
July 23....	Oct. 14....	13.00
Sept. 16....	1959	
1954	Jan. 21....	12.00
Jan. 18....	Feb. 11....	11.50
Feb. 18....	Feb. 24....	11.00
Mar. 9....	Mar. 5....	11.50
Mar. 10....	April 1....	11.00
Mar. 26....	April 20....	11.50
Mar. 29....	May 7....	12.00

**OPS Ceiling.

Antimonial Lead Stocks at Primary Refineries

(A.B.M.S.)

	(In tons of 2,000 pounds)	1956	1957	1958	1959
End of					
Jan. 1956	8,389	10,487	12,689	11,789	
Feb. 1956	9,095	10,220	12,309	12,111	
Mar. 1956	10,289	9,794	12,144	12,065	
Apr. 1956	10,690	9,391	12,468		
May 1956	10,902	9,799	13,154		
June 1956	9,452	9,503	12,856		
July 1956	10,924	8,661	10,482		
Aug. 1956	10,074	9,553	10,889		
Sept. 1956	11,181	10,215	11,004		
Oct. 1956	11,382	11,581	12,050		
Nov. 1956	11,832	11,119	11,828		
Dec. 1956	11,746	11,857	12,595		

Antimonial Lead Production by Primary Refineries

(A.B.M.S.)

	(In tons of 2,000 pounds)	1956	1957	1958	1959
End of					
Jan. 1956	5,045	5,113	3,743	3,541	
Feb. 1956	5,888	5,468	3,657	4,415	
Mar. 1956	5,526	5,091	3,527	4,098	
Apr. 1956	5,818	6,183	3,655		
May 1956	5,405	6,978	4,827		
June 1956	4,456	4,466	3,992		
July 1956	3,853	5,372	2,775		
Aug. 1956	5,343	7,967	5,244		
Sept. 1956	6,709	7,574	4,761		
Oct. 1956	5,378	6,148	5,849		
Nov. 1956	6,993	3,791	3,913		
Dec. 1956	5,766	3,290	4,539		

Total 66,180 67,541 50,482

Lead Imports and Exports By Principal Countries

(A. B. M. S.)

Reported in pigs, bars, etc.; metric tons
except where otherwise noted.

	IMPORTS		
	1958 Dec.	1959 Jan.	1959 Feb.
U. S.† (s.t.)	32,833	16,799	14,609
Canada (s.t.)	225	...	...
Belgium	1,324	...	...
Denmark	1,083	1,423	...
France	3,677	3,858	692
Germany, West††	6,189	...	...
Italy†	1,271	...	...
Netherlands	3,275	2,773	2,746
Norway	1,380	...	...
Sweden	675	...	...
Switzerland	1,479	1,719	1,237
U. K. (l.t.)	23,248	19,621	8,479
India* (l.t.)	2,749	2,296	...
	EXPORTS		
	1958 Dec.	1959 Jan.	1959 Feb.
U. S.† (s.t.)	34	277	68
Canada (s.t.)	11,352	5,034	6,376
Belgium	5,437	...	...
Denmark	600	474	...
France	2,268	2,310	1,554
Germany, West††	2,624	...	...
Netherlands	234	343	507
Sweden	451	...	...
Switzerland	...	...	7
Northern Rhodesia* (l.t.)	832	734	670
Australia* (l.t.)	8,651	...	...

† Refined.

†† Includes scrap.

‡ Includes lead alloys.

* British Bureau of Non-Ferrous Metal Statistics.

French Lead Imports

(A. B. M. S.)

(In metric tons)

	1959		
	Jan.	Feb.	Mar.
Ore. (gr. wt.)	6,876	9,529	5,737
Algeria	...	...	840
Morocco	5,976	9,529	4,522
Fr. Eq. Africa	900	...	375
Pig lead	3,858	692	3,872
Belgium	...	46	30
Germany (W.)	...	17	...
Netherlands	...	1	...
Algeria	1	12	14
Morocco	1,151	403	1,434
Tunisia	2,447	202	2,394
Australia	254	...	...
Other countries	5	11	...
Antimonial lead	32	22	18

U. K. Lead Imports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

	1959		
	Jan.	Feb.	Mar.
(Gross Weight)			
Lead and lead alloys	19,021	8,479	22,251
Australia	10,131	2,530	16,259
Canada	7,456	4,482	4,586
Belgium	103	100	100
Peru	...	100	100
Other countries	1,931	1,267	1,206

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to
ADVERTISE
in the
DAILY METAL REPORTER**

U. S. Lead Consumption

(Bureau of Mines — In Short Tons)

Metal Products:	1958		1959	
	Jan.	Feb.	Jan.	Feb.
Ammunition	40,202	3,569	3,569	3,520
Bearing metals	18,448	1,683	1,683	1,890
Brass and bronze	19,646	1,789	1,895	...
Cable covering	74,535	5,287	4,918	...
Calking lead	66,234	5,472	5,331	...
Casting metals	7,702	784	721	...
Collapsible tubes	7,710	384	679	...
Foil	4,567	*336	306	...
Pipes, traps & bends	21,776	1,722	1,759	...
Sheet lead	24,882	2,152	2,259	...
Solder	57,241	*5,231	5,284	...
Storage battery grids, posts, etc.	154,828	15,011	13,670	...
Storage battery oxides	152,845	15,943	14,083	...
Terne metal	1,525	151	244	...
Type metal	26,313	2,058	2,341	...
Total	678,254	61,572	58,810	...
Pigments:				
White lead	12,658	753	820	...
Red lead & litharge	63,816	4,097	6,856	...
Pigment colors	11,853	884	941	...
Other††	4,357	411	395	...
Total	92,684	6,145	9,012	...
Chemicals:				
Tetraethyl lead	158,302	16,108	11,868	...
Misc. chemicals	2,791	310	280	...
Total	161,093	16,418	12,148	...
Miscellaneous uses:				
Annealing	4,354	394	433	...
Galvanizing	1,067	90	72	...
Lead plating	125	23	7	...
Weights and ballast	5,887	538	436	...
Total	11,433	1,045	948	...
Other uses:				
Unclassified	14,912	1,182	1,305	...
Total reported†	958,376	86,362	82,223	...
Estimated unreported consumption	24,000	2,000	2,000	...
Grand total†	982,400	88,400	84,200	...
Daily average‡	2,691	2,852	3,007	...

* Revised.

†† Includes lead content of leaded zinc oxide production.

‡ Includes lead content of scrap used directly in fabricated products.

‡ Based on number of days in month without adjustment for Sundays and holidays.

Consumers' Lead Stocks, Receipts and Consumption

(Bureau of Mines — In Short Tons)

	Stocks		Net Receipts		Consumed		Stocks	
	Jan. 31, 1959	Feb. 28, 1959	Jan. 31, 1959	Feb. 28, 1959	Jan. 31, 1959	Feb. 28, 1959	Jan. 31, 1959	Feb. 28, 1959
Soft lead	73,823	49,369	53,898	69,294	...	...	...	...
Antimonial lead	36,254	20,475	19,700	37,029	...	...	...	...
Lead in alloys	6,627	4,018	3,659	6,986	...	...	...	...
Lead in copper-base scrap	1,415	1,384	1,469	1,330	...	...	...	...
Total	118,119	75,246	*78,726	114,639	...	...	...	...

* Excludes 3,115 tons of lead which went directly from scrap to fabricated products and 382 tons of lead contained in leaded zinc oxide production.

Consumption of Lead by Class of Product

(Bureau of Mines — In Short Tons)

FEBRUARY

	Soft lead	Antimonial lead	Lead in alloys	Lead in copper-base scrap	Total
Metal products	31,477	19,154	3,650	1,469	55,750
Pigments	8,622	8	...	...	8,630
Chemicals	12,148	...	...	...	12,148
Miscellaneous	606	342	...	...	948
Unclassified	1,045	196	9	...	1,250
Total	53,898	19,700	3,659	1,469	*78,726

* Excludes 3,115 tons of lead which went directly from scrap to fabricated products and 382 tons of lead contained in leaded zinc oxide production.

U. K. Lead Consumption

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 pounds)

	1957	1958	1959
Jan.	29,657	29,607	28,872
Feb.	29,219	27,855	...
Mar.	29,144	29,713	...
Apr.	27,246	26,230	...
May	31,574	28,839	...
June	28,607	28,624	...
July	27,604	27,201	...
Aug.	24,756	21,726	...
Sept.	29,519	28,829	...
Oct.	32,486	31,356	...
Nov.	31,060	28,786	...
Dec.	26,530	27,154	...
Total	347,699	335,920	...

American Antimony

Monthly Average Prices

In bulk, f.o.b. Laredo

(Cents per lb. in ton lots)

	1956	1957	1958	1959
Jan.	33.00	33.00	33.00	29.00
Feb.	33.00	33.00	30.818	29.00
Mar.	33.00	33.00	29.00	29.00
Apr.	33.00	33.00	29.00	29.00
May	33.00	33.00	29.00	...
June	33.00	33.00	29.00	...
July	33.00	33.00	29.00	...
Aug.	33.00	33.00	29.00	...
Sept.	33.00	33.00	29.00	...
Oct.	33.00	33.00	29.00	...
Nov.	33.00	33.00	29.00	...
Dec.	33.00	33.00	29.00	...
Aver.	33.00	33.00	29.485	...

Domestic Zinc Statistics

American Zinc Institute

Commencing with January, 1948, all regularly operating U. S. primary and secondary smelters are included in this report. Production from foreign ores also is included.

	Stock Begin- ning	Pro- duction	Shipments			Stock at End	Daily Avg. Prod.
			Domes- tic	Export & Drawback	Gov't Acc't		
1950 Total	94,221	910,354	849,246	18,189	128,256	995,691	2,494
1950 Mo. Avg.		75,863	70,770	1,516	10,688	82,974	
1951 Total	8,884	931,833	896,800	42,067	39,949	918,816	2,553
1951 Mo. Avg.		77,653	69,733	3,506	3,329	75,565	
1952 Total	21,901	961,430	893,343	56,202	36,626	896,171	2,627
1952 Mo. Avg.		80,119	66,945	4,633	3,052	74,681	
1953 Total	87,160	971,191	818,850	16,326	42,332	877,508	2,661
1953 Mo. Avg.		80,933	68,238	1,361	3,528	73,126	
1954 Total	180,843	868,242	787,922	27,929	103,957	924,808	2,379
1954 Mo. Avg.		72,353	65,660	2,327	9,080	77,067	
1955 Total	40,979	1,031,018	1,007,619	19,497	87,230	1,114,316	2,825
1955 Mo. Avg.		85,918	83,968	1,625	7,267	92,360	
1956 Total		1,062,954	869,270	9,927	157,014	1,076,311	2,904
1956 Mo. Avg.		88,850	72,439	752	13,055	86,275	
1957							
January	68,622	93,452	67,273	450	15,377	83,100	3,014
February	78,974	88,078	67,731	1,527	10,905	80,163	3,146
March	86,889	96,924	67,441	1,558	25,638	84,607	3,127
April	89,357	96,506	55,000	1,411	2,921	80,332	3,217
May	105,531	96,855	60,729	2,106	26,858	112,693	3,124
June	112,693	90,719	54,275	1,358	14,324	69,957	3,024
July	133,455	85,779	57,862	4,497	11,136	73,055	2,761
August	146,179	84,166	70,318	860	9,871	81,049	2,715
September	149,296	77,455	62,111	590	10,341	72,985	2,582
October	153,766	81,492	66,225	372	12,776	79,333	2,629
November	155,925	79,754	73,437	511	9,143	83,166	2,658
December	152,531	86,270	62,730	210	9,188	72,128	2,783
1957 Total		1,067,450	765,132	15,460	179,466	815,567	
1958							
January	166,655	82,343	58,211	641	9,805	68,657	2,656
February	180,346	68,354	49,072	446	9,993	59,511	2,441
March	189,189	72,274	48,948	111	8,763	57,822	2,331
April	203,641	70,214	46,598	159	5,927	52,684	2,340
May	221,171	71,018	51,390	129	...	51,519	2,291
June	240,670	66,967	54,487	171	...	54,658	2,232
July	252,979	65,119	60,312	55	...	60,187	2,101
August	257,911	62,927	68,718	591	...	69,309	2,030
September	251,529	63,705	76,905	213	...	77,118	2,124
October	238,116	65,304	93,018	226	...	93,224	2,107
November	210,176	65,174	83,394	212	...	83,606	2,172
December	191,744	75,503	76,862	148	...	77,010	2,432
1958 Total		828,902	767,755	3,102	34,488	805,325	
1959							
January	190,237	76,481	70,770	171	...	70,941	2,467
February	195,777	71,174	65,641	849	...	66,490	2,542
March	200,461	79,918	73,814	482	...	74,296	2,578
April	206,083	76,393	78,358	255	...	78,613	2,546

Prime Western Zinc Prices (East St. Louis, f.o.b.)

	(Cents per pound)			
	(In tons of 2,240 pounds)			
	1956	1957	1958	1959
Jan.	13.46	13.50	10.00	11.50
Feb.	13.50	13.50	10.00	11.411
Mar.	13.50	13.50	10.00	11.00
Apr.	13.50	13.50	10.00	11.00
May	13.50	11.933	10.00	....
June	13.50	10.84	10.00	....
July	13.50	10.00	10.00	....
Aug.	13.50	10.00	10.00	....
Sept.	13.50	10.00	10.00	....
Oct.	13.50	10.00	10.865	....
Nov.	13.50	10.00	11.386	....
Dec.	13.50	10.00	11.50	....
Aver.	13.497	11.40	10.313	....

High Grade Zinc Prices

	(Delivered)			
	N. Y. Monthly Averages			
	(Cents per pound)			
	1956	1957	1958	1959
Jan.	14.81	14.85	11.35	12.50
Feb.	14.85	14.85	11.35	12.411
Mar.	14.85	14.85	11.35	12.00
Apr.	14.85	14.85	11.084	12.00
May	14.85	13.283	11.00	....
June	14.85	12.19	11.00	....
July	14.85	11.35	11.00	....
Aug.	14.85	11.35	11.00	....
Sept.	14.85	11.35	11.00	....
Oct.	14.85	11.35	11.865	....
Nov.	14.85	11.35	12.386	....
Dec.	14.85	11.35	12.50	....
Aver.	14.847	12.75	11.407	....

U. S. Consumption of Slab Zinc

	Bureau of Mines				
	By Industries (Short Tons)				
	Galvan- izers	Die Casters	Brass products	Rolled zinc	Zinc oxide & other
1950 Total	434,094	281,385	136,451	67,779	27,656
1951 Total	386,373	266,442	141,456	64,000	28,738
1952 Total	375,563	236,022	155,311	51,508	30,885
1953 Total	408,162	305,246	177,801	58,784	38,037
1954 Total	398,599	286,817	107,293	45,979	33,342
1955 Total	439,694	240,790	144,816	50,363	39,302
1956 Total	421,218	352,451	122,395	45,382	36,251
1957					
January	34,337	37,517	10,800	3,502	3,434
February	31,686	32,520	9,156	3,284	3,206
March	30,747	30,946	8,860	3,553	3,378
April	30,631	29,166	9,491	4,001	3,300
May	30,537	28,423	9,563	3,389	3,097
June	29,907	27,688	8,710	3,613	2,646
July	26,067	26,116	6,361	2,698	2,981
August	27,885	29,237	9,755	3,686	3,099
September	28,651	31,051	9,588	2,911	1,590
October	32,940	35,499	10,952	3,385	1,783
November	28,025	31,396	10,024	2,843	1,255
December	24,383	27,927	7,854	2,679	1,427
Total	355,796	358,543	111,114	39,544	20,486
1958					
January	26,861	26,348	9,115	3,183	1,664
February	24,598	22,629	7,279	2,716	1,316
March	27,171	19,045	6,871	3,138	1,724
April	27,464	17,829	6,392	3,259	1,295
May	30,935	18,316	6,597	2,896	2,263
June	34,377	21,497	6,643	2,961	2,212
July	30,677	17,387	6,275	2,848	1,920
August	34,663	20,382	8,358	3,379	1,901
September	34,048	25,188	9,624	3,458	770
October	36,513	27,682	11,753	3,845	881
November	31,658	27,311	10,067	3,276	826
December	31,746	29,926	10,529	3,681	1,018
Total	370,441	273,540	92,906	38,690	16,772
1959					
January	31,729	29,110	11,172	3,874	2,521
February	31,672	26,448	11,508	3,418	2,864

METALS, MAY, 1959

U. K. Zinc Consumption

(British Bureau of Non-Ferrous Metal Statistics)

	(In Tons of 2,240 Pounds)		
	1957	1958	1959
Jan.	28,485	27,473	27,849
Feb.	26,276	24,551	25,676
Mar.	27,049	26,967	27,243
Apr.	24,247	24,984	....
May	29,589	24,579	....
June	25,202	25,077	....
July	25,934	23,794	....
Aug.	20,381	19,076	....
Sept.	27,792	26,747
Oct.	29,552	29,838
Nov.	26,705	26,432
Dec.	24,419	26,042
Total	315,631	306,070

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ADVERTISE
in the
DAILY METAL REPORTER

Mine Production of Zinc in United States

(U. S. Bureau of Mines)

	(In short tons)			
	Eastern States	Central States	Western States	Total U.S.*
1954				
Total	166,487	63,100	234,942	464,539
1955				
Total	163,230	73,630	277,811	514,671
1956				
Total	175,310	61,080	301,253	537,643
1957				
Jan.	14,111	187	20,481	34,779
Feb.	17,839	188	21,323	39,350
Mar.	14,874	180	19,213	34,267
Apr.	13,893	173	18,683	32,749
May	196,877	29,506	290,151	516,534
June	16,165	1,682	20,861	38,708
July	13,652	1,365	18,528	33,545
Aug.	13,922	1,291	20,411	35,624
Sept.	15,719	1,311	22,375	39,405
Oct.	15,680	1,314	23,940	40,934
Nov.	14,931	1,490	16,650	32,971
Dec.	13,427	—	15,985	29,412
1958				
Jan.	15,760	—	13,627	29,387
Feb.	14,857	—	15,279	30,136
Mar.	16,197	—	16,074	32,271
Apr.	15,393	—	16,998	32,391
May	15,064	—	16,939	32,003
June	181,202	8,450	213,267	402,919
July	16,319	—	19,117	35,436
Aug.	16,405	—	19,304	35,709
Sept.	17,602	—	18,488	36,090

*Includes Alaskan output in some months.

Mine Production of Lead in United States

(U. S. Bureau of Mines)

	(In short tons)			
	Eastern States	Central States	Western States	Total U.S.*
1953				
Ttl.	9,970	136,650	188,776	335,412
1954				
Ttl.	8,608	138,940	169,804	317,352
1955				
Ttl.	10,379	145,640	177,409	333,428
1956				
Ttl.	11,395	141,000	195,034	347,429
1957				
Jan.	759	12,392	14,950	28,101
Feb.	619	10,170	12,519	23,308
Mar.	599	9,887	12,393	22,880
Apr.	9,300	135,800	188,392	333,492
May	675	12,513	12,613	25,801
June	542	11,356	11,734	23,632
July	526	4,633	13,148	18,307
Aug.	487	12,438	12,739	25,664
Sept.	626	11,660	11,939	24,225
Oct.	615	10,662	11,499	22,776
Nov.	454	10,019	10,662	21,135
Dec.	447	8,859	9,512	18,818
1958				
Jan.	389	7,734	11,221	19,344
Feb.	517	9,290	11,467	21,274
Mar.	606	10,500	11,823	22,929
Apr.	565	9,600	11,699	21,865
May	6,816	119,070	140,033	265,920
June	469	9,748	13,180	23,397
July	501	8,457	12,392	21,348
Aug.	601	7,943	12,585	21,129

Mine Production of Gold in United States

(U. S. Bureau of Mines)

	(In fine ounces)			
	Eastern States	Western States	Alaska*	Total
1955				
Ttl.	2,026	1,634,625	247,535	1,884,186
1956				
Ttl.	1,998	1,607,930	204,300	1,814,228
1957				
Nov.	182	125,796	27,000	152,978
Dec.	181	123,250	6,790	130,221
Ttl.	2,174	1,556,450	210,000	1,768,624
1958				
Jan.	207	134,282	2,736	137,226
Feb.	147	116,392	59	116,598
Mar.	174	123,808	96	124,078
Apr.	192	124,705	906	125,615
May	203	124,490	557	125,250
June	182	122,277	8,484	130,943
July	38	116,775	29,735	146,528
Aug.	174	113,281	34,947	148,202
Sept.	156	128,613	38,960	167,459
Oct.	186	135,882	42,467	178,535
Nov.	—	—	—	—
Dec.	—	—	10,373	144,757
1959				
Jan.	—	—	1,003	145,077
Feb.	—	—	233	128,614
Mar.	—	—	106	136,648

* Alaska totals based on mint and smelter receipts.

U. S. Silver Production*

(A.B.M.S.)

	(In thousands of ounces; commercial bars, 0.999 fine, and other refined forms)			
	Dom.†	For.†	Total	
1954				
Total	38,059	39,422	77,481	
1955				
Total	33,101	32,780	65,881	
1956				
Total	38,157	40,160	78,317	
1957				
Sept.	2,937	3,263	6,200	
Oct.	3,334	3,419	6,753	
Nov.	2,731	3,374	6,105	
Dec.	3,029	2,872	5,901	
Total	36,279	34,932	71,211	
1958				
January	3,520	3,551	7,071	
February	3,589	2,790	6,379	
March	2,465	3,568	6,033	
April	3,123	3,056	6,179	
May	2,597	2,660	5,257	
June	3,243	3,210	6,453	
July	2,127	2,494	4,621	
August	2,651	3,235	5,886	
September	2,614	3,165	5,779	
October	3,831	2,750	6,581	
November	2,505	3,283	5,788	
December	3,275	3,652	6,927	
Total	35,540	37,414	72,954	
1959				
January	2,330	4,460	6,790	
February	2,827	2,913	5,740	
March	2,823	4,087	6,910	

* The separation between silver of foreign and domestic origin on the basis of refined bars and other refined forms is only approximate.

† Includes purchases of crude silver by the U. S. Mint.

Mine Production of Recoverable Silver in United States

(U. S. Bureau of Mines)

	(In Fine Ounces)			
	Eastern States	Missouri	Western States	Alaska*
1957				
December	50,825	7,000	2,673,590	810
Total	610,386	240,000	37,018,950	26,000
1958				
January	45,358	17,400	2,939,634	—
February	38,608	16,000	2,788,072	—
March	38,134	5,500	2,834,641	72
April	38,308	17,800	2,807,664	453
May	41,840	22,870	2,746,539	1,189
June	3,637	21,300	2,775,606	3,154
July	7,723	21,840	2,503,013	4,584
August	8,819	19,970	2,836,937	5,968
September	5,783	17,180	2,621,537	3,392
October	5,653	20,600	2,749,976	5,338
November	†	16,000	†	3,175
December	†	13,730	†	675
Total	†	210,000	†	28,000
1959				
January	†	21,000	†	132
February	†	18,060	†	154
March	†	17,200	†	10

† Figures not available.

* Alaska totals based on mint and smelter receipts.

Production of Primary Aluminum in the U. S.

(U. S. Bureau of Mines)

	(In short tons)						
	1952	1953	1954	1955	1956	1957	1958
Jan.	76,934	89,895	116,247	128,203	140,394	147,029	139,910
Feb.	72,374	92,649	110,483	116,236	132,763	119,059	121,980
Mar.	77,069	104,460	122,339	130,272	145,895	135,706	134,019
Apr.	76,880	102,071	120,434	126,394	144,726	139,152	128,559
May	80,803	105,464	125,138	131,128	150,800	145,174	129,083
June	77,476	104,152	120,758	127,634	145,726	138,007	115,325
July	78,368	109,285	126,161	132,669	151,624	142,157	118,811
Aug.	85,175	110,545	125,296	133,551	152,406	143,449	125,416
Sept.	76,882	109,333	120,332	130,606	132,316	129,278	124,713
Oct.	77,312	108,219	125,089	134,655	149,125	133,759	139,847
Nov.	74,639	105,636	121,252	133,689	145,081	135,024	140,962
Dec.	83,419	110,291	127,056	140,748	148,391	140,033	153,301
Ttl.	937,330	1,252,013	1,460,565	1,565,721	1,679,427	1,647,710	1,565,556

Average Silver Prices

	(Cents per fine ounce)			
	1956	1957	1958	1959
Jan.	90.357	91.375	89.449	90.19
Feb.	90.90	91.375	88.625	90.444
Mar.	91.128	91.375	88.625	91.351
Apr.	90.875	91.375	88.625	91.375
May	90.75	91.307	88.625	—
June	90.46	90.456	88.625	—
July	90.14	90.31	88.625	—
Aug.	90.614	90.909	88.625	—
Sept.	90.75	90.602	88.673	—
Oct.	90.722	90.625	89.966	—
Nov.	91.375	90.382	90.125	—
Dec.	91.375	89.80	89.932	—
Aver.	90.79	90.824	89.043	—

Note — The averages are based on the price of refined bullion imported on or after August 31, 1943.

U. S. Copper Imports

(A.B.M.S.) (Bureau of the Census)

	(In tons of 2,000 lbs.)		
	Jan.	1959 Feb.	Mar.
Ore, matte & regulus (cont.)	9,931	5,377	8,932
Canada	1,324	470	31
Mexico	274	213	235
Cuba	1,050	...	1,075
Argentina	25	10	...
Bolivia	151	480	...
Chile	3,456	...	2,513
Peru	2,112	153	815
Philippines	...	...	2,701
U. of S. Africa	1,496	3,990	1,525
Australia	43	60	31
Other countries	...	1	6
Blister copper (content)	30,419	21,844	23,636
Mexico	3,439	1,716	2,692
Chile	25,548	18,968	16,325
Peru	...	605	...
Rhodesia & Nyasaland	828	...	1,852
U. of S. Africa	555	555	555
Australia	...	...	2,212
Other countries	49	...	...
Refined cathodes and shapes	2,862	3,548	3,815
Canada	2,250	2,703	3,767
Chile	...	200	...
Peru	612	595	...
Rhodesia & Nyasaland	...	50	...
Other countries	...	...	48
Total Imports:			
Crude & refined	43,212	30,769	36,383
Old and scrap (content)	502	273	351
Brass scrap and old (cu. cont.)	146	32	420

U. S. Copper Scrap Exports

(A.B.M.S.) (Bureau of the Census)

	(In tons of 2,000 lbs.)		
	Jan.	1959 Feb.	Mar.
Copper scrap, unalloyed* (new and old)	1,345	975	928
Canada	258	292	21
Belgium	...	11	...
Germany (W.)	446	231	287
Hungary	...	...	28
Italy	165	...	...
Spain	...	...	50
India	164	160	64
Japan	181	89	56
Other countries	131	192	422
Copper-base scrap, alloyed† (new and old)	4,359	3,188	2,620
Canada	5	4	...
Mexico	...	...	1
Belgium	...	...	25
France	...	...	13
Germany (W.)	510	275	429
Italy	214	22	5
Netherlands	385	193	160
Portugal	...	...	17
Spain	17	4	...
India	43	136	144
Japan	3,013	2,318	1,700
Hong Kong	74	50	104
Other countries	98	186	22

* Ash, brass mill, clippings, dross, flue dust, residues, scale, skimmings, wire scrap.

† Copper-base alloys, including brass and bronze—Ashes, clippings for remanufacture, cupro-nickel scrap, cupro-nickel trimmings, nickel silver scrap, phosphor bronze, phosphor copper, skimmings, turnings, round.

U. S. Copper Exports

(A.B.M.S.) (Bureau of the Census)

	(In tons of 2,000 lbs.)		
	Jan.	1959 Feb.	Mar.
Ore, conc., matte & other unref. (cont.)	1,079	618	401
Refined ingots, bars, etc.†	22,196	20,816	19,404
Canada	893	570	375
Cuba	...	...	3
Argentina	661	882	496
Brazil	1,053	736	589
Belgium	62	...	...
Denmark	112	369	112
France	7,688	4,874	7,723
Germany (W.)	2,775	2,428	2,222
Italy	1,726	1,497	2,040
Netherlands	1,458	934	644
Norway	...	336	280
Sweden	...	...	307
Switzerland	111	503	672
U. Kingdom	3,978	6,408	3,546
Yugoslavia	...	560	...
India	168	95	...
Japan	1,286	566	82
Australia	224	...	280
Other countries	1	58	33
Total Exports:			
Crude & refined	23,275	21,434	19,805
Pipes and tubes	66	79	62
Plates and sheets	35	29	51
Semifabricated forms	99	45	192
Wire, bare	272	188	180
Building wire and cable†	250	226	242
Weatherproof wire†	2	4	6
Insulated copper wire n.e.s.†	758	704	745

† Includes exports of refined copper resulting from scrap that was reprocessed on toll for account of the shipper.

‡ Gross weight; n.e.s. — Not elsewhere specified.

U. S. Lead Imports

(A.B.M.S.) (Bureau of the Census)

	(In tons of 2,000 lbs.)		
	Jan.	1959 Feb.	Mar.
Ore, matte, etc. (content)	17,707	9,698	20,031
Canada	2,724	4,626	2,549
Greenland	...	14	...
Mexico	37	...	82
Honduras	...	107	609
Bolivia	2,646	122	3,332
Chile	...	...	113
Peru	6,054	3,896	7,011
U. of S. Africa	13	519	5,079
Australia	6,162	409	1,183
Philippines	71	...	56
Other countries	...	5	17
Pigs and bars	16,979	14,609	34,850
Canada	1,850	1,016	4,451
Mexico	3,905	4,681	11,383
Peru	1,305	2,872	1,791
Belgium	280	...	...
Denmark	61	23	...
Germany (W.)	110	1,102	1,515
Netherlands	...	...	2
Spain	1,675	221	4,326
United Kingdom	265	...	...
Yugoslavia	2,264	2,175	4,214
Morocco	...	...	2,207
Australia	5,269	2,519	4,961
Other countries	55	...	...
Total Imports:			
Ore, base bullion, refined	34,686	24,307	54,881
Lead scrap, dross, etc. (cont.)	1,280	270	1,605
Antimonial lead & typemetal	634	177	...
Lead content thereof	602	135	...

U. S. Zinc Exports

(A.B.M.S.) (Bureau of the Census)

	(In tons of 2,000 lbs.)		
	Jan.	1959 Feb.	Mar.
Slabs, blocks, etc.	161	183	745
Canada	1	1	2
Mexico	154	110	148
United Kingdom	6	...	...
India	...	...	537
Other countries	...	72	58
Total Exports:			
Ore, conc., slabs, blocks	161	183	745
Scrap, ashes, dross and skimmings	581	23	808
Battery shells and parts, un-assembled	9	...	65
Rolled in sheets, plates and strips and die castings	308	379	308
Zinc & zinc alloys in crude and semifabricated forms	84	116	105
Zinc Oxide	144	106	239

U. S. Zinc Imports

(A.B.M.S.) (Bureau of the Census)

	(In tons of 2,000 lbs.)		
	Jan.	1959 Feb.	Mar.
Zinc ore (content)	50,182	51,165	36,892
Canada	15,398	11,871	13,857
Mexico	19,937	17,657	11,184
Cuba	13	...	...
Honduras	...	43	260
Bolivia	367	...	576
Chile	...	446	...
Peru	5,817	7,168	8,345
Germany (W.)	5,757	...	...
Italy	...	3,448	...
Spain	...	7,269	...
U. of S. Africa	...	312	2,374
Australia	2,832	2,792	233
Philippines	13	...	4
Other countries	48	159	59
Zinc blocks, pigs, etc.	14,951	6,807	16,005
Canada	3,776	3,877	11,143
Mexico	1,946	693	238
Peru	501	600	525
Belgium	827	...	1,532
Germany (W.)	55	...	...
Italy	1,257	193	1,020
Netherlands	56	...	...
Norway	168	...	...
U. Kingdom	756	...	...
Yugoslavia	882	...	...
Belgian Congo	...	1,052	1,547
Rhodesia & Nyasaland	672	392	...
Australia	455	...	...
Total Imports:			
Zinc ore, blocks, pigs	65,133	57,972	52,897
Dross and skim.	81	...	48
Old and worn out	4	11	30

Comparative Metal Prices

	Av.	OPA	1959
Copper, domestic	1939	1946	May 19
Electro., Del. Val.	11.20	14.875	31.50-32.00
Lead (N. Y.)	5.05	8.25	12.00
P. W. Zinc (E. St. Louis, f.o.b.)	5.05	5.05	11.00
New York, del.	...	...	11.50
Tin, Spot Straits, N. Y.	...	...	103.25
Aluminum ingot 99½% + 20.00	15.00	15.00	26.80
Antimony (R.M.M. brand, f.o.b. Laredo)	12.36	14.50	29.00

World Production of Copper

(American Bureau of Metal Statistics)

	United States	Canada	Mexico (crude)	Chile	Peru	Fed. Rep. of Germany	Norway	United Kingdom	Yugoslavia	India	Japan	Turkey	Australia	Northern Rhodesia	Union of South Africa
	(a)	(b)	(c)	(d)	(d)	(e)	(f)	(g-h)	(e)	(f-h)	(e)	(f)	(e)	(e)	(d)
1955															
Total	1,036,702	326,599	61,583	447,288	35,478	286,905	14,876	138,271	31,151	8,432	124,903	26,313	41,935	350,302	47,176
1956															
Total	1,133,134	356,251	69,918	506,251	35,005	279,461	16,457	127,365	32,390	8,827	139,062	27,101	55,711	435,186	47,914
1957															
Nov.	90,045	35,823	5,778	42,995	3,227	23,127	1,464	9,606	3,080	775	13,166	1,862	4,527	44,013	5,134
Dec.	95,285	36,593	5,446	43,765	4,786	21,786	1,424	9,607	3,207	810	13,038	2,114	4,388	42,459	4,672
Total	1,115,483	360,745	42,905	461,141	255,710	17,265	121,799	37,186	9,298	143,654	27,101	55,633	499,418	47,828	
1958															
Jan.	94,735	32,841	5,272	41,578	3,990	23,790	1,554	7,909	3,000	348	12,345	2,091	4,334	42,996	4,285
Feb.	87,130	30,639	4,849	39,648	3,235	21,792	1,340	11,495	3,064	756	10,806	1,509	4,045	36,364	4,708
Mar.	90,336	34,190	5,954	40,205	3,497	25,161	1,669	9,559	3,023	821	10,195	2,580	5,555	44,847	4,731
April	86,123	32,535	6,101	16,115	4,010	23,266	1,463	9,854	3,149	788	8,515	2,942	5,220	41,396	4,413
May	80,628	32,471	6,141	23,264	3,481	24,433	1,636	7,995	2,967	786	9,806	2,574	6,229	41,615	4,488
June	71,092	32,418	5,954	34,811	3,405	23,128	1,674	7,414	3,102	769	10,617	1,810	6,819	44,447	4,018
July	64,444	31,131	5,995	40,495	3,780	24,418	1,610	9,091	3,245	801	10,762	1,136	6,139	44,010	3,324
Aug.	67,917	50,867	6,340	45,211	3,646	26,409	1,855	3,451	2,838	786	11,053	.....	6,220	42,000	4,974
Sept.	79,541	27,546	6,294	40,913	3,637	24,649	1,749	12,027	2,870	792	12,583	.....	.....	17,291	4,726
Oct.	92,214	22,572	5,380	47,230	2,950	27,635	1,618	11,225	3,616	809	13,310	.....	.....	.....	4,749
Nov.	96,359	20,368	5,049	46,310	3,923	24,932	1,594	8,542	3,462	774	11,764	.....	.....	25,612	4,249
Dec.	97,641	19,023	5,066	46,284	3,196	25,569	1,597	9,042	2,929	832	15,054	.....	.....	45,935	4,406
Total	1,881,170	346,816	68,366	462,064	42,750	296,312	.....	106,134	.....	9,062	136,612	.....	.....	426,513	.....
1959															
Jan.	95,542	24,669	5,342	44,579	3,115	25,945	.....	7,356	.....	679	17,284	.....	.....	48,609	.....
Feb.	88,432	28,916	4,810	43,589	1,627	24,103	.....	9,211	.....	557	.....	.....	.....	44,420	.....
Mar.	101,118	.....	4,771	.....	1,601	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

(a) Reported by Copper Institute. Crude, "recoverable contents of mine production or smelter production or shipments, and custom intake." Does not include intake of scrap nor of imported ore except that received from Canada and Philippines. (b) Blister copper plus recoverable copper in concentrates, matte, etc., exported. (c) Crude copper, i. e., copper content of blister or converter copper as originally produced in the several countries, although some of it may be refined at home; e. g., in Rhodesia. (d) Blister and/or refined. (e) Refined. There are quantities of scrap included in the electrolytic production in addition to that reported, tonnage of which is not obtainable. (f) Smelter production. (g) Refinery production from imported blister only. (h) British Bureau of Non-Ferrous Metal Statistics. * Refined.

World Production of Refined Lead

(American Bureau of Metal Statistics)

	United States	Canada	Mexico	Peru	Belgium	France	Fed. Rep. of Germany	Italy	Spain	Yugoslavia	Japan	Australia (a)	French Morocco	Tunisia	Rhodesia	Total
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
1955																
Total	547,153	148,811	221,138	67,303	91,241	73,251	162,508	46,806	67,509	83,347	40,912	254,558	28,870	28,620	17,976	1,893,125
1956																
Total	613,293	147,865	213,524	61,917	111,479	73,251	178,713	42,780	64,824	83,507	51,019	256,300	30,993	26,623	17,024	1,984,344
1957																
Nov.	48,771	12,125	19,491	6,374	9,257	8,396	16,703	4,063	4,840	7,373	5,678	24,987	2,806	2,598	1,456	177,739
Dec.	50,500	12,504	19,465	6,951	8,191	7,512	17,215	4,231	5,460	7,846	5,785	24,095	4,173	3,123	1,568	180,412
Total	604,533	142,935	218,266	55,971	.....	94,509	195,136	42,336	61,332	85,313	59,670	261,035	34,441	27,069	12,364	2,052,431
1958																
Jan.	47,665	12,672	20,144	5,188	8,375	7,501	18,017	4,013	5,297	6,042	4,974	25,518	3,323	1,785	1,232	173,922
Feb.	47,133	11,432	18,341	5,306	8,347	7,959	15,939	4,433	5,337	7,452	4,352	23,628	3,326	2,781	1,176	167,791
Mar.	43,441	12,837	18,455	6,899	8,773	7,890	16,548	4,597	6,392	8,600	4,335	26,359	3,375	2,174	1,204	171,654
April	47,487	12,212	21,005	5,421	9,058	8,339	16,327	4,652	6,281	7,021	3,481	19,876	2,338	2,394	1,204	160,946
May	40,984	11,785	21,099	5,626	8,917	8,858	15,144	4,202	6,944	7,482	3,541	25,035	3,532	2,978	1,204	174,255
June	44,636	12,706	17,846	6,255	8,264	7,977	15,194	3,677	6,403	6,469	3,461	22,979	2,906	3,127	1,232	164,278
July	38,827	7,176	18,315	6,880	8,548	8,548	11,225	4,581	6,327	6,872	3,567	21,563	2,767	568	1,232	147,624
Aug.	39,250	6,940	17,991	6,100	7,495	15	15,760	4,584	6,913	5,414	3,610	19,942	2,584	2,756	1,176	140,501
Sept.	43,269	10,908	16,256	5,192	7,849	8,202	15,700	4,367	5,692	6,942	3,587	22,632	2,184	2,369	1,120	158,285
Oct.	45,467	12,598	11,968	5,074	7,940	9,308	17,130	4,639	7,121	9,242	3,522	22,482	3,560	2,410	1,176	164,818
Nov.	40,486	10,645	17,067	6,448	9,495	9,068	17,785	4,825	6,914	11,155	3,555	20,148	2,625	2,519	1,120	165,406
Dec.	44,042	11,076	20,902	5,344	10,342	10,351	18,370	5,101	7,069	11,212	3,769	21,492	4,002	2,779	1,120	179,309
Total	575,612	130,886	246,443	80,999	119,192	111,337	223,973	60,866	77,490	.....	52,915	271,654	42,266	32,359	16,492	.....
1959																
Jan.	43,652	14,073	19,031	4,951	10,761	8,296	18,658	4,636	6,215	.....	6,006	24,470	2,575	1,068	1,344	.....
Feb.	39,498	.....	15,472	2,662	9,460	7,571	17,869	4,437	6,020	.....	.....	.....	2,319	1,765	1,344	.....
Mar.	39,238	.....	16,305	3,424	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,344	.....

(a) Production credited to Australia includes lead refined in England from Australian base bullion.

World Production of Slab Zinc

(American Bureau of Metal Statistics)

	United States	Can.	Mexico	Peru	Belgium	France	(In Tons of 2,000 Pounds)				Italy	Nether-lands	Norway	Spain	Yugo-slavia	Japan	Aus-tralia	Rhe-nesia	Total
	(a)	(b)		(b-c)		(a)	Fed. Rep. of Germany	Great Britain				(b)				(a)	(b)	(b)	(d)
1955																			
Total 1956	1,031,018	257,008	61,879	18,943	233,623	123,623	197,024	90,917	77,761	31,203	49,724	26,244	15,175	122,965	113,221	31,248			2,534,457
1957																			
Total 1957	1,062,954	255,601	62,136	10,428	251,906	124,105	204,961	90,784	80,407	32,123	53,170	25,224	15,434	153,821	117,445	32,396			2,630,383
Aug.	84,166	20,305	5,144	3,233	19,391	12,387	16,617	7,272	7,029	2,641	4,373	2,143	2,740	14,008	10,675	2,856			220,368
Sept.	77,455	20,247	5,090	3,000	20,129	10,631	16,389	7,100	6,954	2,698	4,476	1,911	2,745	13,753	10,300	2,800			211,477
Oct.	81,490	20,890	5,351	2,892	21,688	12,305	16,800	7,292	6,133	2,781	4,419	2,011	2,011	14,215	10,829	2,856			221,830
Nov.	79,754	20,933	5,227	3,014	21,660	11,884	16,580	7,036	5,712	2,763	4,399	2,164	2,164	12,905	10,521	2,772			215,399
Dec.	86,270	21,829	5,441	3,333	22,274	12,413	17,684	7,483	6,596	2,742	4,483	2,789	2,189	18,638	10,895	2,828			230,624
Total 1958	1,574,500	247,356	62,354	35,772	259,701	148,455	202,627	85,548	81,179	32,786	52,787	24,279	30,256	162,145	123,587	33,040			2,692,833
Jan.	82,343	21,801	5,561	3,271	22,382	12,795	17,187	7,179	4,911	2,654	4,134	2,209	2,943	13,126	10,816	2,828			221,112
Feb.	68,354	19,743	4,985	2,669	22,026	12,028	15,562	6,599	5,275	2,659	4,030	1,975	2,797	12,072	9,642	2,576			199,114
Mar.	72,274	22,314	5,620	2,782	21,453	13,786	16,743	7,584	6,549	2,709	3,851	2,045	3,013	13,217	10,707	2,856			214,049
April	70,214	20,989	5,289	2,597	20,886	14,985	15,693	8,018	6,925	2,586	3,850	2,207	2,853	9,305	10,424	2,772			204,625
May	71,018	21,269	5,254	2,699	20,949	15,279	16,128	6,343	7,202	2,442	3,962	2,372	2,871	13,504	10,918	2,856			211,529
June	66,967	20,354	5,016	2,429	20,094	14,243	15,663	7,202	7,731	2,221	3,307	2,309	2,854	14,040	10,988	2,744			204,067
July	65,119	20,878	5,285	2,520	19,556	14,295	16,210	7,140	5,879	2,471	3,815	2,296	2,928	15,835	10,742	2,884			203,828
Aug.	62,297	21,152	5,216	2,822	18,308	14,253	16,204	6,689	5,991	2,533	3,793	2,259	2,820	12,420	10,075	2,912			200,885
Sept.	63,705	20,531	5,025	2,640	17,961	12,232	15,635	6,887	5,991	2,533	3,793	2,259	2,820	12,420	10,075	2,912			199,142
Oct.	65,304	21,125	5,344	2,305	17,866	14,176	16,462	6,046	6,442	2,820	4,915	2,313	2,793	14,436	11,045	2,940			203,169
Nov.	65,174	20,274	5,197	2,625	18,696	13,274	16,196	6,158	5,874	2,249	4,669	2,244	3,370	13,501	10,508	2,828			197,481
Dec.	75,503	21,705	5,537	2,686	19,402	13,844	17,090	7,564	6,444	2,332	4,755	2,262	2,684	12,473	10,960	2,856			204,888
Total 1959	892,607	254,661	18,354	34,685	257,540	177,422	210,408	80,494	5,955	2,841	54,423	26,750	.....	166,883	128,548	39,508			.....
Jan.	76,481	21,456	5,476	2,753	19,857	13,903	17,164	5,955	5,217	2,693	4,826	.....	.....	11,679	.....	2,800			.....
Feb.	71,174	19,709	4,915	2,497	19,838	13,991	15,632	5,123	4,735	2,927	4,928	.....	.....	.....	.....	2,548			.....
Mar.	79,918	22,135	5,439	2,363	.....	.....	.....	7,792	.....	.....	4,917	.....	.....	.....	.....	.....			.....

U. K. Stocks of Zinc

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

		Virgin Zinc		Zinc Conc.	
At start of:		1958	1959	1958	1959
Jan.	44,926	34,166	79,349	56,371	
Feb.	43,308	34,805	82,125	58,518	
Mar.	46,662	36,850	87,721	57,897	
Apr.	46,608	38,457	84,631	52,151	
May	47,251	...	80,964	...	
June	50,539	...	74,470	...	
July	49,613	...	71,553	...	
Aug.	48,497	...	70,105	...	
Sept.	45,590	...	63,909	...	
Oct.	45,784	...	57,376	...	
Nov.	39,341	...	53,371	...	
Dec.	35,396	...	58,022	...	

U. K. Zinc Imports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

		1959	1958	1957
(Gross Weight)		Jan.	Feb.	Mar.
Zinc ore and conc.	27,979	972	6,156	
Zinc conc.	8,510	5,991	*	
Australia	8,023	5,524	...	
Burma	487	467	...	
Zinc and zinc alloys:				
(Gross Wt.)	15,083	15,674	15,437	
Rhodesia-				
Nyasaland	200	225	175	
Australia	...	1,175	975	
Canada	6,938	7,537	7,825	
Belgium	2,180	1,583	1,484	
Germany (W.)	500	...	801	
Netherlands	1,305	275	719	
Soviet Union	1,611	2,118	1,412	
United States	26	855	8	
Belgian Congo	525	500	500	
Other countries	1,798	1,406	1,538	

* Not available.

U. K. Copper Exports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

		1959	1958	1957
(Gross Weight)		Jan.	Feb.	Mar.
Copper unwrought				
—ingots, blocks, slabs, bars, etc.	7,835	9,465	5,901	
Plates, sheets, rods, etc.	3,953	1,777	1,342	
Wire (including insulated electric wire)	3,033	6,105	423	
Tubes	1,162	907	1,013	
Other copper, worked (including pipe fittings)	95	90	65	
Total	16,078	18,344	8,744	

METALS, MAY, 1959

Copper Consumption in United Kingdom

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 pounds)

	Unalloyed	Alloyed*	Total	Virgin	Scrap
1956 Total	388,167	251,312	639,479	500,794	138,685
1957					
December	30,043	18,591	48,634	38,104	10,530
Total	407,326	234,158	641,484	507,493	133,991
1958					
January	35,799	20,816	56,615	46,437	10,178
February	32,207	19,352	51,559	37,907	13,652
March	33,491	19,580	53,071	41,539	11,532
April	36,722	19,100	55,822	43,784	12,038
May	35,810	18,423	54,233	43,571	10,662
June	39,277	18,141	57,418	46,080	11,338
July	36,743	17,091	53,834	42,373	11,461
August	28,416	13,756	42,172	33,073	9,108
September	42,813	18,596	61,409	52,018	9,390
October	43,402	21,788	65,190	53,937	11,253
November	40,987	19,232	60,219	47,932	12,287
December	37,580	19,118	56,698	45,968	10,730
Total	442,977	225,001	667,978	534,619	133,359
1959					
January	32,678	21,217	53,895	39,815	13,164
February	29,373	19,020	48,393	35,775	12,618
March	27,864	19,567	47,431	36,124	11,307

* Includes copper sulphate effective October, 1954.

U. K. Virgin Copper Stocks

(British Bureau of Non-Ferrous Metal Statistics)

		1958	1959
At start of:		1957	1958
Jan.	59,614	91,477	64,184
Feb.	59,203	82,483	65,941
Mar.	62,120	89,147	65,875
Apr.	61,779	94,330	72,946
May	71,101	88,582	...
June	61,991	88,913	...
July	64,121	81,851	...
Aug.	81,146	84,756	...
Sept.	98,595	89,899	...
Oct.	100,815	85,092	...
Nov.	90,877	74,686	...
Dec.	81,657	69,023	...

U. K. Refined Lead Stocks

(British Bureau of Non-Ferrous Metal Statistics)

		1958	1959
(In long tons)		1957	1958
Jan.	39,420	51,295	45,444
Feb.	41,433	49,134	48,102
Mar.	36,900	47,738	40,535
Apr.	34,877	40,547	42,761
May	44,933	37,509	...
June	40,804	34,608	...
July	42,148	40,518	...
Aug.	48,275	37,148	...
Sept.	51,435	43,758	...
Oct.	45,301	48,856	...
Nov.	50,371	40,216	...
Dec.	48,065	35,335	...

Zinc Imports and Exports By Principal Countries

(A. B. M. S.)

Reported in pigs, bars, etc.; metric tons except where otherwise noted.

		1958	1959
IMPORTS		1957	1958
U. S. (s.t.)	18,669	14,951	6,807
Canada (s.t.)	337	...	...
Belgium	4	...	...
Denmark	1,023	1,373	...
France	1,425	1,717	1,094
Germany, West†	6,683	...	...
Italy	634	...	...
Netherlands	1,792	836	725
Sweden	1,842	...	...
Switzerland†	1,259	1,157	654
U. K.† (l.t.)	13,752	15,083	15,674
India* (l.t.)	1,916	3,048	...
EXPORTS		1957	1958
U. S. (s.t.)	281	161	183
Canada (s.t.)	18,344	9,313	15,945
Belgium	10,712	...	...
Denmark	516	216	...
France	1	50	20
Germany, West†	3,764	...	...
Italy	2,000	...	...
Netherlands	1,893	2,731	731
Norway	3,033	...	...
Switzerland†	739	340	227
U. K.* (l.t.)	455	1,300	368
Northern Rhodesia† (l.t.)	2,986	1,993	2,015
Australia* (l.t.)	3,294	...	...

† Includes scrap.

* Includes manufactures.

British Bureau of Non-Ferrous Metal Statistics.

United Kingdom Tin Statistics

(British Bureau of Non-Ferrous Metal Statistics)

		Tin Ore		Tin Metal	
		Imports	Production*	Imports	Production*
1957 Total	39,272	1,028	...	9,834	34,175
1958					
March	2,350	89	3,261	1,018	3,106
April	2,678	82	4,407	582	1,790
May	2,707	101	3,872	1,428	3,490
June	1,315	104	2,431	1,029	2,964
July	2,007	107	2,020	329	2,904
August	2,235	44	2,063	1,525	2,423
September	1,743	99	1,564	1,141	2,579
October	1,913	91	1,419	145	2,488
November	1,971	96	1,770	851	2,187
December	2,757	90	2,299	317	2,350
1958 Total	27,419	1,090	...	13,195	32,551
1959					
January	1,337	113	1,095	324	2,925
February	1,817	...	...	230	1,677

*As reported by International Tin Study Group. Production of Tin Metal includes production from imported scrap and residues refined on toll. Stocks exclude strategic stock but include official warehouse stocks.

Canada's Copper Output

(Dominion Bureau of Statistics)

(Refined Copper)				
(In Tons)				
1956	1957	1958	1959	
Jan. . . 26,653	25,469	32,868	24,721	
Feb. . . 26,229	21,861	28,668	28,016	
Mar. . . 26,750	27,663	29,239	32,418	
Apr. . . 26,617	27,398	30,635	....
May . . 27,626	29,086	32,471	....
June . . 27,122	24,093	32,418	....
July . . 27,250	27,195	31,131	....
Aug. . . 29,219	26,943	30,867	....
Sept. . 27,950	24,633	27,546	....
Oct. . . 29,696	30,312	22,572	....
Nov. . . 27,346	27,331	20,368	....
Dec. . . 28,716	31,604	19,033	....
Year	331,174	323,588	346,816	....

Canada's Copper Exports

(Dominion Bureau of Statistics)

(Ingots, bars, slabs and billets)				
(In Tons)				
1956	1957	1958	1959	
Jan. . . 15,981	20,582	26,883	10,620	
Feb. . . 11,041	16,272	16,816	10,304	
Mar. . . 12,276	14,270	18,662	11,025	
Apr. . . 14,476	16,417	23,261	....
May . . 12,851	19,048	19,358	....
June . . 10,985	10,826	20,831	....
July . . 13,599	18,621	21,703	....
Aug. . . 14,710	21,980	15,881	....
Sept. . 17,268	14,314	15,373	....
Oct. . . 13,896	13,110	20,341	....
Nov. . . 19,130	16,622	14,391	....
Dec. . . 18,630	16,282	11,138	....
Year	174,843	198,794	224,638	....

Canada's Lead Output

(Dominion Bureau of Statistics)

(Recoverable Lead)*				
(In Tons)				
1956	1957	1958	1959	
Jan. . . 16,002	14,032	17,117	17,118	
Feb. . . 14,344	15,170	14,908	15,923	
Mar. . . 16,857	16,940	15,421	....
Apr. . . 11,573	14,275	15,644	....
May . . 15,446	14,591	15,131	....
June . . 18,145	16,431	15,645	....
July . . 15,841	14,377	14,076	....
Aug. . . 16,104	14,679	12,260	....
Sept. . 15,760	15,869	15,401	....
Oct. . . 16,725	14,151	14,564	....
Nov. . . 14,865	15,879	16,680	....
Dec. . . 16,056	15,296	18,248	....
Year	188,971	171,690	185,095	....

* New base bullion from Canadian ores plus recoverable lead in ores or concentrates shipped for export.

Canada's Lead Exports

(Dominion Bureau of Statistics)

(In Pigs)				
(In Tons)				
1956	1957	1958	1959	
Jan. . . 4,888	8,946	4,752	5,034	
Feb. . . 3,856	6,633	1,553	6,377	
Mar. . . 4,007	7,044	9,497	....
Apr. . . 7,636	7,314	7,450	....
May . . 7,214	9,676	7,764	....
June . . 6,632	7,210	4,036	....
July . . 9,696	4,682	12,629	....
Aug. . . 4,713	6,416	7,232	....
Sept. . 9,908	8,467	5,125	....
Oct. . . 9,072	7,761	10,320	....
Nov. . . 9,227	6,175	10,641	....
Dec. . . 2,734	4,217	11,352	....
Year	79,633	84,541	92,351	....

Canada's Zinc Output

(Dominion Bureau of Statistics)

(Refined Zinc)				
(In Tons)				
1956	1957	1958	1959	
Jan. . . 21,696	20,340	21,801	21,456	
Feb. . . 20,358	19,808	19,743	19,709	
Mar. . . 22,010	21,941	22,314	....
Apr. . . 21,339	20,504	20,989	....
May . . 21,790	20,564	21,269	....
June . . 20,780	19,928	20,353	....
July . . 21,691	20,061	20,873	....
Aug. . . 21,354	20,305	21,152	....
Sept. . 20,691	20,247	20,530	....
Oct. . . 21,412	20,892	21,125	....
Nov. . . 20,470	20,933	20,273	....
Dec. . . 22,012	21,823	21,705	....
Year	255,607	247,351	252,157	....

Canada's Zinc Exports

(Dominion Bureau of Statistics)

(Slabs in Tons)				
1956	1957	1958	1959	
Jan. . . 15,550	19,304	17,349	13,565	
Feb. . . 11,757	16,618	8,376	12,675	
Mar. . . 8,822	14,923	19,636	....
Apr. . . 14,317	17,131	16,346	....
May . . 11,357	16,680	15,122	....
June . . 15,296	16,157	7,776	....
July . . 15,499	12,912	27,394	....
Aug. . . 13,070	20,520	15,906	....
Sept. . 19,732	17,671	8,670	....
Oct. . . 20,792	16,735	22,810	....
Nov. . . 21,411	17,225	17,978	....
Dec. . . 16,125	16,131	18,344	....
Year	183,728	202,007	195,707	....

Canada's Silver Exports

(Dominion Bureau of Statistics)

(In ores and concentrates)			
(Fine Ounces)			
1957	1958	1959	
Jan. . . 253,940	634,715	185,367	
Feb. . . 380,463	208,149	329,742	
Mar. . . 521,849	350,827	....
Apr. . . 431,646	284,971	....
May . . 523,228	376,082	....
June . . 468,559	438,253	....
July . . 844,545	529,770	....
Aug. . . 811,530	279,511	....
Sept. . 861,857	583,570	....
Oct. . . 432,000	323,475	....
Nov. . . 263,273	217,892	....
Dec. . . 186,569	871,573	....
Year	5,979,459	5,098,788	....

Canada's Silver Output

(Dominion Bureau of Statistics)

(In Ounces)			
1957	1958	1959	
Jan. . . 2,158,631	2,529,583	3,094,440	
Feb. . . 2,051,679	2,294,655	2,264,903	
Mar. . . 2,346,316	2,448,698	....
Apr. . . 2,225,638	2,558,958	....
May . . 2,111,185	2,650,665	....
June . . 2,208,584	2,527,632	....
July . . 2,383,390	2,385,687	....
Aug. . . 2,592,468	2,884,154	....
Sept. . 2,382,121	2,856,304	....
Oct. . . 2,817,358	2,390,027	....
Nov. . . 2,566,519	2,643,790	....
Dec. . . 2,537,984	2,917,528	....
Year	28,361,873	31,087,681	....

Canada's Nickel Output

(Dominion Bureau of Statistics)

(In Tons)				
1956	1957	1958	1959	
Jan. . . 14,985	16,609	16,710	8,047	
Feb. . . 14,997	15,027	15,896	12,616	
Mar. . . 15,504	16,733	15,853	14,922	
Apr. . . 14,431	15,347	15,163	....
May . . 15,203	16,225	15,231	....
June . . 14,492	15,447	14,603	....
July . . 15,125	15,878	12,851	....
Aug. . . 14,852	16,756	12,597	....
Sept. . 14,530	15,604	11,786	....
Oct. . . 15,762	15,628	3,682	....
Nov. . . 15,062	14,587	3,178	....
Dec. . . 14,824	15,096	3,298	....
Year	178,767	188,962	140,842	....

Canadian Copper Exports

(Dominion Bureau of Statistics)

	(In tons of 2,000 lbs.)		
	1959 Jan.	1959 Feb.	1959 Mar.
Ore, matte, regulus, etc. (content)	2,493	2,476	2,625
United States	339	469	230
Norway	2,154	391	2,095
United Kingdom	11	51	51
Japan	1,605	249	
Ingots, bars, billets, anodes	10,620	10,304	11,025
United States	2,099	2,705	3,707
Brazil	124	66	49
Belgium	840	280	
France	1,176	840	1,176
Germany (W.)	784	728	728
Italy	84		
Netherlands	223		
United Kingdom	4,646	5,404	5,308
India	671	28	
Japan	110		
Other countries	57	59	57
Total Exports:			
Crude & refined	13,113	12,780	13,650
Old and scrap	150	190	466
Rods, strips, sheet & tubing	1,673	358	576

Canadian Zinc Exports

(Dominion Bureau of Statistics)

	(In tons of 2,000 lbs.)		
	1959 Jan.	1959 Feb.	1959 Mar.
Ore (zinc content)	13,566	12,675	14,617
United States	13,566	12,675	14,617
Slab zinc	9,313	15,945	22,731
United States	3,524	3,376	11,519
Brazil	106	220	110
Chile	77		
Denmark			336
Germany (W.)	112	56	
Netherlands	168	784	896
United Kingdom	5,134	11,132	9,600
Korea	248		270
Hong Kong		56	
India		244	
Other countries	21		
Total Exports:			
Ore and slabs	22,879	28,620	37,348
Zinc scrap, dross, ashes	425	64	73
United States	81	64	48
Belgium	75		
Netherlands	191		
Japan	78		25

French Copper Imports

(A. B. M. S.)

	(In metric tons)		
	1959 Jan.	1959 Feb.	1959 Mar.
Crude copper for refining (blister, black and cement)	813	11	
United Kingdom		11	
Belgian Congo	813		
Refined	17,451	14,451	16,927
United States	8,819	5,437	5,229
Canada	254	1,270	1,885
Belgium	4,218	4,878	5,839
Germany (W.)	357	148	112
Norway	203		305
United Kingdom	250	40	
Belgian Congo	2,410	1,212	1,652
Rhodesia-Nyasaland	940	1,466	1,905

METALS, MAY, 1959

Canadian Lead Exports

(Dominion Bureau of Statistics)

	(In tons of 2,000 lbs.)		
	1959 Jan.	1959 Feb.	1959 Mar.
Ore (lead content)	3,318	2,091	3,355
United States	3,318	2,091	3,355
Refined lead	5,034	6,376	11,831
United States	1,758	859	4,811
Uruguay			88
Netherlands		56	
United Kingdom	3,276	5,393	6,658
Japan		24	
Taiwan			44
Korea			223
Other countries		44	7
Total Exports:			
Ore and refined	8,352	8,467	15,186
Pipe and tubing		3	3
Lead scrap	205	48	206

Copper Imports and Exports By Principal Countries

(A. B. M. S.)

Reported in ingots, slabs, etc., metric tons except where otherwise noted.

	IMPORTS		
	1958 Dec.	1959 Jan.	1959 Feb.
U. S. (blister, s.t.)	30,318	30,419	21,844
(ore, etc., s.t.)	5,140	9,931	5,377
(ref., s.t.)	4,453	2,862	3,548
Belgium†	13,192		
Denmark	101	843	
France (crude)	813		813
(refined)	14,207	17,451	14,451
Italy	13,214		
Germany, West	26,631		
Netherlands	2,355	1,781	3,051
Norway	330		
Sweden	5,337		
Switzerland	2,833	2,741	2,169
U. K. (l.t.)	38,200	39,960	31,432
India (blister/-refined, l.t.)*	1,923	2,631	
EXPORTS			
U. S. (ore and unref., s.t.)	396	1,079	618
(refined, s.t.)	45,587	22,196	20,816
Canada (refined, s.t.)	11,138	10,620	10,304
Belgium†	10,554		
Finland†	675	530	
Germany, West	8,236		
Norway	1,165		
Sweden	1,526		
U. K. (l.t.)	3,786	7,835	9,465
No. Rhodesia (blister & ref., l.t.)*	33,836	41,058	30,601

† Includes alloys.

‡ Includes old.

* British Bureau of Non-Ferrous Metal Statistics.

Canada's Nickel Exports

(Dominion Bureau of Statistics)

	(Refined, in oxides, matte, etc.)		
	(In Tons)	1957	1958
January	14,260	14,233	6,767
February	9,974	12,157	7,976
March	14,958	12,316	14,006
April	18,671	20,962	
May	18,351	20,674	
June	14,539	16,144	
July	14,181	14,065	
August	14,966	13,012	
September	14,160	14,371	
October	13,370	8,335	
November	16,620	3,061	
December	14,606	5,060	
Year	178,656	154,220	

French Zinc Imports

(A. B. M. S.)

	(In metric tons)		
	1959 Jan.	1959 Feb.	1959 Mar.
Ore (gross weight)	16,621	23,864	18,315
Belgium	524		
Greece	545	1,565	
Italy	3,935	369	1,548
Norway		651	355
Spain	795		
Yugoslavia		5,108	
Algeria	3,038	6,776	6,896
Morocco	7,784	9,395	4,552
Belgian Congo			3,867
Australia			1,097
Slabs, bars, blocks, etc.	1,717	1,094	875
Belgium	1,165	915	633
Germany (W.)	100	118	50
Italy	152	51	182
Netherlands	280		
Norway	6		
Algeria	14	10	10

French Metal Exports

(A. B. M. S.)

	(In metric tons)		
	1959 Jan.	1959 Feb.	1959 Mar.
LEAD			
Ore (g. wt.)	668	247	1,055
Pig lead	2,310	1,554	2,631
Uruguay	25	30	90
Denmark		457	559
Germany (W.)	260	540	330
Sweden			508
Switzerland	755	505	245
United Kingdom	1,270		762
Other countries		22	137
Antimonial lead	327	257	253

COPPER

Crude copper for refining (blister, black and cement) 60

ZINC

Slabs, bars, blocks, etc. 50 20

U. K. Copper Imports

(British Bureau of Non-Ferrous Metal Statistics)

	(In tons of 2,240 lbs.)		
	1959 Jan.	1959 Feb.	1959 Mar.
(Gross Weight)			
Copper and copper alloys	39,960	31,432	44,291
U. of S. Africa	725		
Rhodesia-Nyasaland	19,337	16,752	21,883
Canada	3,874	3,778	8,074
Belgium	9	3	4
Germany (W.)	44	30	38
Norway	226	200	400
Sweden		1	
United States	8,709	4,120	4,276
Chile	6,044	6,275	9,350
Peru	150		
Belgian Congo	800	250	250
Other countries	42	23	16
Of which:			
Electrolytic	30,254	20,339	28,675
Other refined	2,625	3,375	5,230
Blister or rough	6,959	7,644	10,319
Wrought and alloys	122	74	67
Total	39,960	31,432	44,291

Nonferrous Castings

MONTHLY SHIPMENTS, BY TYPE OF METAL (Bureau of Census — Thousands of Pounds)

	Alu- minum	Copper	Mag- nesium	Zinc	Lead Die
1954 Total	607,764	834,557	25,572	474,741	18,396
1955 Total	833,058	1,011,748	27,892	781,254	21,045
1956 Total	801,136	966,473	36,168	88,069	20,734
1957					
Sept.	58,692	70,804	2,279	47,736	2,115
Oct.	64,140	81,836	2,192	62,332	2,481
Nov.	58,898	70,187	1,920	58,689	1,590
Dec.	53,102	65,708	1,533	49,597	1,399
Total	751,856	875,389	30,322	663,330	23,791
1958					
January	57,845	69,707	1,881	50,658	1,566
February	50,695	58,356	1,803	42,687	1,294
March	50,547	60,157	1,975	39,719	1,630
April	44,948	59,311	2,215	35,796	1,467
May	44,093	57,606	2,422	36,447	1,655
June	40,701	57,124	2,205	38,132	1,971
July	38,818	51,124	2,200	32,765	1,394
August	45,034	57,790	1,869	35,860	1,804
September	52,796	64,447	2,804	47,127	1,725
October	55,699	74,012	2,627	45,045	1,708
November	55,793	62,476	2,615	48,431	1,409
December	59,487	67,905	2,612	55,600	1,497
Total	596,816	739,915	27,228	508,297	18,920
1959					
January	62,927	66,874	2,151	53,347	1,571
February	62,486	69,589	2,162	48,779	1,285

Copper Castings Shipments

BY TYPE OF CASTING (Bureau of Census) (Thousands of Pounds)

	Total	Sand	Permanent	Die	All Other
1952 Total	1,009,910	910,862	63,865	8,259	26,924
1953 Total	990,496	888,369	61,316	10,077	30,734
1954 Total	834,557	751,804	48,849	6,480	27,394
1955 Total	1,011,748	907,852	63,041	8,541	31,408
1956 Total	966,113	866,404	57,522	10,023	32,134
1957					
Aug.	71,233	64,953	3,278	799	2,203
Sept.	70,804	64,470	3,243	870	2,221
Oct.	81,836	74,391	3,693	1,057	2,695
Nov.	70,187	63,944	3,006	862	2,375
Dec.	65,708	59,606	3,046	888	2,168
Total	875,389	789,819	44,746	10,776	30,048
1958					
January	69,707	63,294	3,327	894	2,192
February	58,356	52,579	3,202	796	1,779
March	60,157	54,007	3,395	823	1,932
April	59,311	53,271	3,385	949	1,705
May	57,606	51,634	3,077	891	1,904
June	57,124	51,967	3,001	839	1,317
July	51,124	46,636	2,351	792	1,345
August	57,590	52,981	2,425	682	1,702
September	64,447	58,435	2,888	876	2,248
October	74,012	67,564	3,239	790	2,419
November	62,476	57,386	2,604	810	1,946
December	67,905	61,119	3,535	1,059	2,192
Total	739,985	667,255	36,529	10,201	22,681
1959					
January	66,874	59,856	3,572	1,216	2,230
February	66,589	62,593	3,557	1,176	2,263

Nickel Averages

Electro, cathode sheets, 99.00%,
f.o.b. refinery, duty included

	1956	1957	1958	1959
Jan.	64.50	74.00	74.00	74.00
Feb.	64.50	74.00	74.00	74.00
Mar.	64.50	74.00	74.00	74.00
Apr.	64.50	74.00	74.00	74.00
May	64.50	74.00	74.00	....
June	64.50	74.00	74.00	....
July	64.50	74.00	74.00	....
Aug.	64.50	74.00	74.00	....
Sept.	64.50	74.00	74.00	....
Oct.	64.50	74.00	74.00	....
Nov.	64.50	74.00	74.00	....
Dec.	72.48	74.00	74.00	....
Aver.	65.165	74.00	74.00	....

Platinum Averages

N. Y. MONTHLY QUOTATIONS
(Dollars per Troy Ounce)

	1956	1957	1958	1959
Jan.	106.30	101.92	77.85	52.57
Feb.	104.34	98.59	74.82	59.25
Mar.	104.23	93.50	72.096	77.10
Apr.	103.92	93.45	70.72	77.18
May	105.23	92.865	67.34	....
June	106.50	92.02	66.18	....
July	106.50	90.265	64.35	....
Aug.	105.76	84.426	60.94	....
Sept.	105.50	84.00	59.60	....
Oct.	104.85	84.00	57.327	....
Nov.	104.50	83.80	56.41	....
Dec.	104.50	78.70	53.154	....
Aver.	105.18	89.79	65.07	....

Spot Straits Tin

(Straits, Open Market, N. Y.) Monthly Average Prices

	1956	1957	1958	1959
Jan.	105.036	101.511	92.94	99.411
Feb.	100.803	101.132	93.915	102.785
Mar.	100.786	99.643	94.452	103.042
Apr.	92.268	99.304	92.988	102.505
May	96.994	98.347	94.512	....
June	94.589	98.05	94.708	....
July	96.143	96.52	94.892	....
Aug.	99.049	94.261	94.988	....
Sept.	103.809	93.406	94.101	....
Oct.	106.023	91.838	96.523	....
Nov.	110.921	89.236	99.118	....
Dec.	104.268	92.35	98.989	....
Aver.	101.475	96.301	95.177	....

Prompt Tin Prices

(Straits, Open Market, N. Y.) Monthly Average Prices (Cents per Pound)

	1956	1957	1958	1959
Jan.	104.768	101.347	92.653	99.351
Feb.	100.586	100.257	93.763	102.708
Mar.	100.524	99.476	94.363	103.042
Apr.	99.145	99.286	92.988	102.505
May	96.853	98.335	94.512	....
June	94.488	98.025	94.619	....
July	96.131	96.44	94.892	....
Aug.	98.924	94.159	94.976	....
Sept.	103.559	93.313	94.054	....
Oct.	105.716	91.848	96.455	....
Nov.	110.329	89.236	98.985	....
Dec.	104.00	92.34	98.96	....
Aver.	101.252	93.672	95.069	....

Quicksilver Averages

N. Y. Monthly Averages

Virgin, Dollars per 76-lb Flask

	1956	1957	1958	1959
Jan.	277.80	256.00	224.35	219.50
Feb.	270.29	256.00	229.39	219.50
Mar.	261.40	256.00	232.096	223.57
Apr.	267.22	256.00	233.06	239.52
May	267.675	256.00	229.48	....
June	260.69	256.00	229.00	....
July	256.06	256.00	230.25	....
Aug.	256.00	252.20	240.27	....
Sept.	256.00	248.58	241.12	....
Oct.	255.92	234.48	235.94	....
Nov.	255.13	228.33	230.05	....
Dec.	256.00	226.50	223.54	....
Aver.	261.71	248.51	230.96	....

Primary Aluminum Output, Shipments and Stocks

	(U. S. Department of Interior)			
	Stocks beginning of month short tons	Production short tons	Sold or Used— Short tons	Value l. o. b. plant
1957				
November	183,414	135,024	146,333	78,858,676
December	172,105	140,036	140,996	70,850,564
Total		1,647,714	1,579,035	
1958				
January	171,142	139,910	134,983	\$69,837,103
February	176,069	121,980	118,608	61,426,895
March	179,441	134,019	123,461	63,341,320
April	189,999	124,999	127,608	63,222,858
May	187,390	126,357	130,160	62,816,641
June	183,557	115,326	130,787	63,091,679
July	168,096	118,541	134,083	64,726,335
August	152,554	125,416	132,765	64,611,494
September	145,205	124,714	146,870	71,641,275
October	124,274	139,836	139,908	68,881,146
November	124,202	140,962	126,619	62,133,129
December	138,545	152,201	145,125	70,946,494

Stocks
end of
month
short tons

Virgin Aluminum

	Ingots (30 lb.) 99½% Plus, Delivered			
	Monthly Average Prices (Cents per pound)			
	1956	1957	1958	1959
Jan.	24.40	27.10	28.10	26.80
Feb.	24.40	27.10	28.10	26.80
Mar.	24.60	27.10	28.10	26.80
Apr.	25.90	27.10	26.10	26.80
May	25.90	27.10	26.10	....
June	25.90	27.10	26.10	....
July	25.90	27.10	26.10	....
Aug.	26.70	28.10	26.77	....
Sept.	27.10	28.10	26.80	....
Oct.	27.10	28.10	26.80	....
Nov.	27.10	28.10	26.80	....
Dec.	27.10	28.10	26.80	....
Aver.	26.008	27.517	26.889	....

Aluminum Wrought Products

PRODUCERS' MONTHLY NET SHIPMENTS
(Bureau of Census — Thousands of Pounds)

	Total	Plate, Sheet, & Strip	Rolled Structural Shapes, Rod, Bar & Wire	Extruded Shapes Tube Blooms & Tubing	Powder, Flake, & Paste
1955 Total	2,805,500	1,542,368	365,391	812,311	35,854
1956 Total	2,870,101	1,577,601	398,602	782,398	28,017
1957					
October	230,913	121,654	23,075	69,554	2,104
November	186,974	114,618	31,501	64,197	1,716
December	177,520	96,078	21,363	54,672	1,480
Total	2,677,423	1,396,502	399,040	789,430	28,187
1958					
January	193,678	108,616	21,915	67,188	1,538
February	207,459	118,835	21,983	58,296	1,927
March	190,092	108,913	20,692	55,973	1,533
April	210,477	118,793	22,178	62,737	1,954
May	217,299	115,660	27,361	67,376	2,389
June	228,587	118,767	28,674	74,580	2,248
July	229,654	126,160	24,678	72,194	2,642
August	213,548	115,376	23,581	67,953	3,154
September	231,168	125,937	23,287	75,269	2,665
October	254,023	128,967	24,442	85,038	2,163
November	216,249	121,190	17,771	71,666	1,723
December	235,377	130,474	26,253	72,979	1,806
Total	2,624,911	1,441,385	285,355	821,249	25,742
1959					
January	235,463	132,361	26,480	70,309	2,246
February	230,733	131,564	21,740	71,364	2,028

Magnesium Wrought Products Shipments

(Bureau of Census)

(Thousands of Pounds)

	1955	1956	1957	1958
Jan.	1,776	2,188	2,130	1,271
Feb.	1,648	1,901	2,522	1,280
Mar.	1,947	1,946	2,388	1,398
Apr.	1,756	2,279	2,511	1,479
May	1,836	2,462	2,230	1,443
June	1,686	2,302	1,881	1,709
July	1,437	2,002	1,428	1,227
Aug.	1,742	2,523	1,540	1,823
Sept.	2,159	2,031	1,501	1,807
Oct.	1,667	861	1,453	1,983
Nov.	1,954	2,141	1,230	1,662
Dec.	1,577	2,452	1,102	1,622
Total	21,186	24,975	21,915	18,702

Aluminum Castings Shipments

(Bureau of Census)

BY TYPE OF CASTING

(Thousands of Pounds)

	Total	Sand	Permanent Mold	Die	All Other
1954 Total	609,066	158,738	213,968	232,726	6,800
1955 Total	833,058	171,757	298,115	354,804	8,282
1956 Total	801,036	171,763	245,421	376,108	7,736
1957					
November	58,898	10,411	18,611	29,793	...
December	53,102	9,302	16,724	26,978	...
1957 Total	751,656	144,121	232,326	369,086	...
1958					
January	57,845	10,724	18,082	28,937	...
February	50,695	9,601	15,456	25,579	...
March	50,547	9,311	15,255	25,918	...
April	44,948	9,531	13,369	21,956	...
May	44,093	9,312	13,648	21,091	...
June	40,701	8,644	13,679	18,292	...
July	38,818	8,658	12,342	17,714	...
August	45,034	9,034	14,426	21,505	...
September	52,796	10,261	16,241	26,254	...
October	55,699	10,932	17,189	27,511	...
November	55,793	10,539	16,942	28,264	...
December	59,487	10,874	18,970	29,579	...
Total	596,790	117,421	186,949	292,599	...
1959					
January	62,927	10,907	20,606	21,349	...
February	62,846	10,627	21,127	31,021	...

Cadmium Averages

N. Y. Monthly Averages

Cents per lb. in ton lots

	1956	1957	1958	1959
Jan.	170.00	170.00	155.00	145.00
Feb.	170.00	170.00	155.00	145.00
Mar.	170.00	170.00	155.00	145.00
Apr.	170.00	170.00	155.00	120.00
May	170.00	170.00	155.00	....
June	170.00	170.00	155.00	....
July	170.00	170.00	155.00	....
Aug.	170.00	170.00	155.00	....
Sept.	170.00	170.00	152.60	....
Oct.	170.00	170.00	145.00	....
Nov.	170.00	170.00	145.00	....
Dec.	170.00	166.40	145.00	....
Aver.	170.00	169.70	152.30	....

Steel Ingot Production

(American Iron and Steel Institute)

Period	Estimated Production — All Companies				Calculated weekly production, all companies (net tons)	
	OPEN HEARTH	BESSEMER	ELECTRIC	TOTAL	% of capacity	% of capacity
	Net tons	% of capacity	Net tons	% of capacity	Net tons	% of capacity
1954 Total ..	80,327,494	73.6	2,548,104	53.2	88,311,652	71.0
1955 Total ..	102,840,585	91.6	3,227,997	67.4	115,216,149	89.8
1956						
October ..	8,348,522	84.1	154,577	40.5	9,197,717	81.1
November ..	7,674,698	79.9	134,709	36.4	8,392,919	76.5
December ..	6,783,262	68.3	108,337	28.3	7,420,285	65.5
Total ..	101,685,776	87.0	2,475,138	54.9	112,714,996	84.5
1957						
January ..	6,085,124	58.6	121,338	35.5	6,753,912	56.1
February ..	5,252,112	56.0	81,597	26.4	5,782,373	53.6
March ..	5,598,944	53.9	122,317	35.7	6,254,622	52.3
April ..	4,875,619	48.5	109,433	33.1	5,532,991	47.8
May ..	6,602,123	53.7	110,366	32.3	6,301,159	62.7
June ..	6,378,942	53.4	88,126	26.6	7,127,480	61.6
July ..	6,712,587	55.0	114,218	33.4	6,420,405	53.7
August ..	6,481,815	62.4	134,135	39.3	7,286,003	61.1
September ..	6,769,660	67.3	103,194	31.2	7,610,372	65.8
October ..	7,795,541	75.0	148,468	43.4	8,817,779	73.8
November ..	7,572,555	75.3	145,867	44.1	8,569,318	74.1
December ..	7,764,000	74.7	117,000	34.2	8,793,000	72.9
Total ..	75,888,392	62.0	1,896,348	54.7	85,257,363	69.6
1959						
January ..	8,280,985	77.1	120,005	39.5	9,317,385	74.3
February ..	8,540,000	88.0	129,000	47.0	9,603,000	84.8
March ..	10,216,474	95.1	184,892	60.9	11,567,745	92.3
April ..	9,881,000	95.0	196,000	66.7	11,272,000	92.9

Blast Furnace Output

(American Iron and Steel Institute)

Period	net tons			
	Pig Iron	Manganese & Spiegeleisen	Total Capacity	%
1950				
Ttl. Yr. ..	64,810,272	678,896	65,484,168	91.6
1951				
Ttl. Yr. ..	70,487,880	745,381	71,233,761	98.3
1952				
Ttl. Yr. ..	81,828,668	829,926	82,158,891	84.2
1953				
Total ..	74,987,721	855,038	75,842,759	95.8
1954				
Total ..	88,119,882	868,785	88,988,117	71.4
1955				
Total ..	77,114,078	868,788	77,980,931	92.7
1956				
Sept. ..	6,870,064	69,864	6,932,448	98.7
Oct. ..	7,245,639	69,900	7,315,539	100.8
Nov. ..	6,977,457	58,814	7,036,091	100.1
Dec. ..	7,268,743	65,841	7,334,584	101.0
Total ..	75,301,134	664,341	75,965,475	88.9
1957				
Jan. ..	7,209,547	72,826	7,282,373	98.8
Feb. ..	6,596,133	61,973	6,658,106	100.0
Mar. ..	7,179,100	67,779	7,246,879	98.3
Apr. ..	6,810,102	60,784	6,870,886	96.3
May ..	6,879,881	65,566	6,945,447	94.2
June ..	6,593,326	66,266	6,659,592	93.3
July ..	6,625,901	66,031	6,691,932	90.8
Aug. ..	6,719,763	61,988	6,781,751	92.0
Sept. ..	6,569,074	58,837	6,627,911	92.9
Oct. ..	6,454,450	65,028	6,519,478	88.4
Nov. ..	5,711,242	68,637	5,779,879	81.0
Dec. ..	5,212,624	69,175	5,281,799	62.8
Total ..	78,567,011	782,660	79,339,671	91.4
1958				
Jan. ..	4,785,269	69,175	4,854,444	62.8
Feb. ..	4,016,276	47,953	4,064,229	58.2
Mar. ..	4,418,778	45,175	4,463,953	57.8
Apr. ..	3,787,907	39,302	3,827,209	51.2
May ..	4,048,328	25,468	4,073,796	52.7
June ..	4,396,285	26,463	4,422,748	59.1
July ..	4,277,515	26,668	4,304,183	55.7
Aug. ..	4,799,955	31,374	4,831,329	62.1
Sept. ..	5,041,042	31,348	5,072,390	67.8
Oct. ..	5,835,995	36,963	5,872,958	76.0
Nov. ..	5,907,888	39,275	5,946,163	79.5
Dec. ..	6,025,385	47,505	6,072,890	78.6
Total ..	57,298,644	466,456	57,765,100	63.5
1959				
Jan. ..	6,260,395	48,572	6,311,823	77.9
Feb. ..	6,047,398	45,274	6,122,672	85.3
March ..	7,461,760	48,291	7,510,051	93.4
April ..	7,338,372	54,234	7,392,606	95.0

Galvanized Sheet Shipments

(American Iron and Steel Institute)

Period	Net Tons			
	1956	1957	1958	1959
Jan. ..	269,464	235,902	186,649	279,244
Feb. ..	272,997	205,048	167,827	281,637
Mar. ..	291,193	206,836	195,885	311,961
Apr. ..	266,728	198,585	206,368	.....
May ..	272,741	206,657	231,818	.....
June ..	279,058	239,037	277,180	.....
July ..	.....	167,247	239,883	.....
Aug. ..	276,048	186,790	253,263	.....
Sept. ..	256,803	183,952	258,723	.....
Oct. ..	278,637	212,886	290,157	.....
Nov. ..	265,135	190,380	253,909	.....
Dec. ..	239,173	159,363	266,472	.....
Total ..	2,957,991	2,392,637	2,828,848	.....

* Combined with August figures.

Steel Castings Shipments

(Bureau of Census)

Period	(Short Tons)		
	Total	For Sale	For Own Use
1951 ..	2,101,804	1,507,413	594,191
1952 ..	1,925,116	1,476,352	448,767
1953 ..	1,829,277	1,290,016	431,330
1954			
Total ..	1,184,096	880,158	303,938
1955			
Total ..	1,530,694	1,166,706	363,988
1956			
Dec. ..	158,725	125,569	33,156
Total ..	1,931,987	1,512,290	416,697
1957			
Feb. ..	154,932	121,667	33,265
Mar. ..	160,054	124,416	35,638
Apr. ..	162,498	124,549	37,949
May ..	164,575	125,431	39,144
June ..	153,647	119,353	34,294
July ..	122,018	90,037	31,981
Aug. ..	145,926	111,080	34,846
Sept. ..	139,002	105,611	33,391
Oct. ..	146,397	113,216	33,181
Nov. ..	127,115	98,436	28,679
Dec. ..	120,787	92,125	28,662
Total ..	1,766,191	1,261,301	406,444
1958			
Jan. ..	120,722	94,717	26,005
Feb. ..	103,297	79,708	23,589
Mar. ..	106,233	82,195	24,038
Apr. ..	91,464	69,121	22,343
May ..	87,002	66,086	20,916
June ..	92,681	71,624	21,057
July ..	68,802	48,618	20,184
Aug. ..	80,886	59,816	21,070
Sept. ..	85,277	64,586	20,691
Oct. ..	95,389	73,367	22,022
Nov. ..	85,267	65,788	19,479
Dec. ..	103,800	81,360	22,440
Total ..	1,114,939	859,125	255,814
1959			
Jan. ..	105,392	82,693	22,709
Feb. ..	110,280	86,013	24,267

SHIPMENTS OF TIN-TERNEPLATE

(American Iron and Steel Institute)

Period	Net Tons			
	Hot Dipped	Electrolytic	1958	1959
Jan. ..	31,465	30,304	474,359	417,210
Feb. ..	29,451	24,602	397,861	442,625
Mar. ..	36,794	46,706	419,102	597,408
Apr. ..	43,670	.....	468,568	.....
May ..	37,628	.....	402,521	.....
June ..	42,850	.....	429,761	.....
July ..	45,481	.....	422,776	.....
Aug. ..	46,037	.....	464,439	.....
Sept. ..	43,217	.....	525,739	.....
Oct. ..	60,261	.....	763,361	.....
Nov. ..	14,596	.....	113,134	.....
Dec. ..	15,842	.....	150,942	.....
Total ..	447,356	.....	5,040,190	.....

Steel Ingot Operations

(Percentage of Capacity as Reported)

by American Iron & Steel Institute)

Week				
Beginning	1956	1957	1958	1959
Jan. 6 ..	97.6	98.4	56.1	76.2
Jan. 13 ..	98.6	96.4	57.0	73.6
Jan. 20 ..	99.0	96.6	55.5	74.6
Jan. 27 ..	100.4	97.6	54.0	72.6
Feb. 4 ..	99.3	97.1	54.0	76.9
Feb. 11 ..	99.1	97.7	53.5	83.8
Feb. 18 ..	98.8	97.8	50.9	83.7
Feb. 25 ..	98.8	96.0	54.6	88.5
Mar. 4 ..	99.3	97.1	53.1	90.3
Mar. 11 ..	100.0	93.8	52.4	92.0
Mar. 18 ..	100.6	93.5	52.5	92.9
Mar. 25 ..	99.5	92.4	50.6	92.9
Apr. 1 ..	96.6	90.6	48.6	93.2
Apr. 8 ..	97.7	90.3	48.5	93.3
Apr. 15 ..	100.9	90.4	46.8	93.8
Apr. 22 ..	100.2	88.7	47.9	93.5
Apr. 29 ..	100.5	87.0	47.8	94.2
May 6 ..	96.4	86.7	49.4	92.0
May 13 ..	95.2	84.2	52.3	92.9
May 20 ..	95.3	86.4	56.4	.....
May 27 ..	97.3	88.0	58.1	.....
June 3 ..	96.3	87.5	62.4	.....
June 10 ..	96.7	86.5	84.0	.....
June 17 ..	93.4	85.2	64.9	.....
June 24 ..	93.0	84.0	61.7	.....
July 1 ..	84.9	78.5	51.0	.....
July 8 ..	12.3	78.7	53.4	.....
July 15 ..	12.9	79.3	54.9	.....
July 22 ..	14.6	79.4	57.3	.....
July 29 ..	17.0	79.4	57.8	.....
Aug. 5 ..	16.9	79.8	58.8	.....
Aug. 12 ..	57.5	80.6	60.5	.....
Aug. 19 ..	87.5	82.1	62.6	.....
Aug. 25 ..	95.8	82.2	63.5	.....
Sept. 2 ..	97.0	81.0	61.7	.....
Sept. 9 ..	98.7	81.9	65.9	.....
Sept. 16 ..	100.6	82.1	65.6	.....
Sept. 23 ..	100.6	82.2	67.3	.....
Sept. 30 ..	101.6	82.6	70.4	.....
Oct. 7 ..	101.8	82.8	71.6	.....
Oct. 14 ..	100.9	80.9	74.2	.....
Oct. 21 ..	101.4	80.2	74.8	.....
Oct. 28 ..	101.2	79.7	75.0	.....
Nov. 4 ..	101.3	78.0	74.5	.....
Nov. 11 ..	100.6	77.7	74.5	.....
Nov. 18 ..	100.2	76.0	74.1	.....
Nov. 25 ..	100.1	72.1	73.7	.....
Dec. 2 ..	101.1	71.5	73.5	.....
Dec. 9 ..	101.3	69.2	73.5
Dec. 16 ..	102.0	67.7	74.5
Dec. 23 ..	94.3	53.7	74.5
Dec. 30 ..	97.3	59.0	73.6

METALS, MAY, 1959

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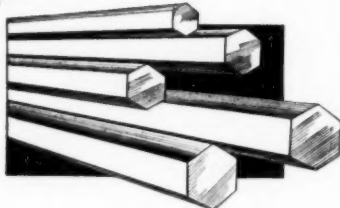
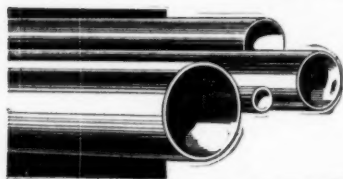
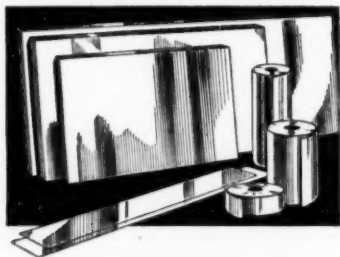
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